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THE UNIVERSITY OF ALBERTA

A COMPETENCY ANALYSIS OF OCCUPATIONAL HEALTH NURSING IN
ALBERTA

by



ELIZABETH REGINA DAWSON

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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THE UNIVERSITY OF ALBERTA
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A COMPETENCY ANALYSIS OF OCCUPATIONAL HEALTH NURSING IN ALBERTA submitted by ELIZABETH REGINA DAWSON in partial fulfilment of the requirements for the degree of MASTER OF EDUCATION.

ABSTRACT

The educational requirements of a nurse working in the field of occupational health have become more demanding as the nurse's role has expanded from giving emergency medical treatment for work related accidents to the provision of comprehensive health care in the workplace.

The passing of the Alberta Occupational Health and Safety Act in December, 1976 was indicative of the provincial governments' growing concern for the health and safety of the province's working population. In order to enforce such an act the Gale Commission (1975) recommended that educational programs be provided to prepare health professionals to monitor the health and safety of workers. The first such program in North America for Occupational Health Nurses was established in Edmonton at Grant MacEwan Community College.

The purpose of this study was to identify the knowledge, skills, and/or judgments that are required by an occupational health nurse to function effectively on the job.

The study consisted of two distinct phases. Phase I took the form of a three-day workshop which involved eleven practising occupational health nurses, who were representative of all occupational health nurses working in Alberta. Together, this group developed a listing of eleven major categories of competence required by an occupational

health nurse. Each category was further broken down into specific statements of competence reflecting the skills, knowledge, and/or judgments which together would constitute that category. The listing as developed by that working group was graphically produced on a chart-like document referred to as a Competency Analysis Profile for Occupational Health Nursing.

Phase II of the study involved distribution of the profiles developed during Phase I to all known occupational health nurses working in Alberta. The intent of this validation phase was to determine the extent of agreement throughout the province with the original profile. An additional purpose of Phase II of the study was to determine where the identified skills, knowledge and/or judgments had been acquired.

The study then resulted in the creation of a validated Competency Analysis Profile for the Occupational Health Nurse.

Based on the findings of the study, recommendations were made to: Alberta Department of Advanced Education and Manpower, Alberta Workers Health Safety and Compensation, Grant MacEwan Community College, and Nurse Educators throughout the Province.

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CHAPTER I

The educational requirements of a nurse working in the field of occupational health have become more demanding as the nurses's role has expanded from giving emergency medical treatment to the provision of comprehensive health care in the workplace. The Alberta Association of Registered Nurses (1970) in their brief to the Alberta Commission on Educational Planning, established by Order in Council, 1969, stated that:

"Basic nursing education is only the first step toward professional competence. Nursing practice today must be based on an expanding body of knowledge which is not only kept up to date but also parallels the changes in the community health sciences and the rapid developments in medical and social sciences. It is generally agreed that no basic preparation for a profession regardless of how well founded will equip the practitioner with all the knowledge required for a lifetime of practice (p. 39)."

As the role expectations of an occupational health nurse differ from industry to industry so does the degree of competence exhibited by nurses working in occupational health positions. As a relatively new area of interest in Alberta, occupational health does not have well defined job descriptions for personnel. The Gale (1975) report of the Alberta Industrial Health and Safety Commission made two recommendations that relate to the training and competence of occupational health personnel. The recommendations were as follows:

To overcome the shortage of occupational health personnel which is local, national and worldwide, we have recommended the establishment of appropriate training programs in our universities, colleges and institutes to produce industrial health physicians, industrial health nurses, industrial hygienists and engineers with an interest in ergonomics.

We have also recommended that the respective professional associations recognize the importance of occupational health care and that they actively encourage their members who practice in this field to maintain their competence and avoid obsolescence.
(p.157)

Further outgrowth of the report was reflected in the passing of the Occupational Health and Safety Act (December, 1976). The act was indicative of the Alberta Government's concern for the health and safety of the Province's working population. Regulation #50 of that acts states: "Every employer who is responsible for a work site shall ensure that there is employed on that site a nurse who will be placed in charge of the first aid work where there are 200 or more workers working at one time." (p.3-4). Anticipated new government regulations will require that occupational health services be provided at the work place under the supervision of a nurse qualified in Occupational Health Nursing.

In response to these concerns this study was conducted to produce and validate a competency analysis profile of an occupational health nurse. The need for such an occupational analysis was reflected in the Government of Alberta's Advanced Education and Manpower's Position Paper on Nursing Education: Principles and Issues (1977) which included the following directive:

Nurse educators should reach agreement with employers and the related professions on the parameters of practice for nurses, and should develop the education programs required to produce nurses at a specified level of competence. (p.6)

Statement of the Problem

This study was conducted because of a lack of well defined job performance requirements for nurses working in the field of occupational health in Alberta. Emanating from this basic problem the study addressed the following questions:

1. What skills and knowledge are used on the job or perceived as relevant to the job of occupational health nursing by a representative group of practising occupational health nurses?
2. To what extent do all occupational health nurses in Alberta agree with the skills and knowledge identified by the representative group?
3. Where were the identified skills and knowledge acquired?

Significance of the Study

Nursing education in Alberta has been closely scrutinized for the past four years. The Alberta Advanced Education and Manpower Report of the Alberta Task Force on Nursing Education (1975) recommendation #30 suggested that:

"articulation among educational institutions be instituted by: (1) preparation of well-defined curricular outlines for each course spelled out in terms of measurable objectives that can be used as a base for transfer agreements;" (p. 117)

The first formal educational program in Canada for occupational health nurses was established on a part time basis at Grant MacEwan Community College, Edmonton, Alberta, in 1974. The program was developed in response to the need for increased knowledge and skills as expressed by occupational health nurses working in the Edmonton area. By 1977 the program had expanded to provide for both full time attendance requiring eight months of study and part time attendance which allowed students to spread their program over a four year period. In 1978, classes were offered on a part-time basis in Calgary.

It is expected that the results of this study will be utilized in the revision of the existing program curriculum as a foundation for developing a competency based approach to certification in occupational health nursing. Any new program such as the Occupational Health Nursing Certificate program offered by Grant MacEwan Community College faces the problem of gaining recognition and credibility for the certificate granted. It is anticipated that this study will assist in achieving that recognition and credibility.

This study will have significance in that it has already increased awareness of role expectations of occupational health nurses among the health professionals, and industrial and government officials involved in the study. Clarification of the role of the nurse working in occupational health should facilitate further clarification of the role of other occupational health personnel such as

hygienists, physicians, and safety officers.

Limitations of the Study

This study had the following limitations:

1. The study was limited to nurses known to be working in Occupational Health positions in Alberta as identified by the Medical Services Branch of the Alberta Occupational Health and Safety Division.
2. The study was limited by the degree of comprehension and accuracy of responses made by participants to the questions on the research instrument.

Definition of Terms

The following are definitions that are used throughout the report.

Diploma Nursing Program: An approved program taken within a non-university institution wherein eligibility to write the registration examinations is concurrent with obtaining the diploma conferred by the institution. (The Alberta Advanced Education and Manpower Report of the Alberta Task Force on Nursing Education, 1975).

Occupational Health Nursing: "the application of nursing principles in conserving the health of workers in all occupations. It involves prevention, recognition, and treatment of illness and injury and requires special skills and knowledge in the fields of health education,

and counseling, environmental health, rehabilitation, and human relations." (American Association of Occupational Health Nurses, 1976).

Competence: "the ability to do well something worthwhile; the knowledge, skills, values and attitudes needed to carry out properly an activity important to success in one's personal or professional life; the ability to meet or surpass prevailing standards of adequacy for a particular activity." (Butler, 1978 p.7).

Competency Analysis Profile: A term used by Manuel and Deane (1976) to describe a large, chart-like document, that depicts the major categories of competence, and specific competency statements, that together represent the expected knowledge, skills, and values required to function effectively in a specific occupation.

Validation: A term used by Manuel and Deane (1976) to describe the second phase of their approach to curriculum development. This phase involves submitting the profile developed by a small selected group of practitioners in a specific occupation to the scrutiny of a larger segment of the occupation to ascertain the extent of agreement with the original profile.

Summary

Many Alberta nurses realize that they have not been adequately prepared to function in the field of occupational health. An educational program has been developed to meet the needs of this group of nurses. Ideally, the curriculum for any such program should be based on an occupational analysis which describes the skills and knowledge that are required for competence on the job. This study resulted in the creation of a competency analysis profile of an occupational health nurse in Alberta.

CHAPTER II

As the purpose of this study was to develop a competency analysis profile of an occupational health nurse, the literature review focussed on two areas. Literature relevant to occupational analysis as a major component of developing a curriculum for an instructional program was examined to justify the use of the methodology chosen for the study. Then a review of issues in the field of the educational preparation of occupational health nurses was conducted.

Review of Literature Related to Occupational Analysis

Hindes (1976) defines occupational analysis as:

a process that examines an occupation and lists the various performance skills, and knowledge, which in total make up the occupation. Within this list there exists items that are most critical to the learning process as related to occupational performance. The analysis process must identify these critical items. (p. 7).

In implementing an occupational analysis, Hindes recommends analyzing the competent workers' performance as a basis for developing all levels of vocational training and education. This approach would seem appropriate in a field such as occupational health where there are few clearly defined job descriptions for personnel such as physicians, nurses, hygienists, and safety officers. Any one skill might be common in an occupational analysis of all the occupational health personnel but the educational

preparation for attainment of that skill would be developed at varying levels. Such sharing of common areas of instruction can economize on the cost of instructional materials as well as educational planning and development time.

With the ever increasing competition for funding of post-secondary educational programs, the term (once thought of as restricted to industry) "quality control", is now very important in the field of education. Employers, governments, and taxpayers are demanding that educational institutions be held accountable for the quality of the products (students) that they graduate. Several approaches to curriculum development that have attempted to produce that quality product have been developed over the years. Brooke (1977) claims that too often new educational programs are developed without adequate input from the practitioners. He warns against program planning without following the major components of occupational analysis, formulation of objective course content, methodology evaluation, and validation. One of the best known models of such a curriculum development process used in Canada is DACUM (Developing a Curriculum), reported by Adams (1975). This popular model has been extensively modified in the development of Canadian adult training programs such as: Nova Scotia New Start (1971), Holland College's Self-Training and Evaluation Program STEP (Coffin and Sands, 1977), and Georgian College of Applied Arts and Technology's

systems model for adult training. (Leslie and Dimitrick, 1977).

A systematic approach to curriculum development is deemed necessary for the preparation of graduates prepared to function in today's rapidly changing industrialized society. Butler (1972) has developed a Training System Development Process which includes the following twelve steps:

1. Conduct Feasibility Study
2. Conduct Task Analysis
3. Develop Training Objectives
4. Develop Criterion Test
5. Validate Criterion Test
6. Validate Training Objectives
7. Develop Learning Sequence
8. Develop Learning Strategies
9. Develop Individual Lessons
10. Validate Individual Lessons
11. Implement and Field Test System
12. Follow-up on Graduates (p.53)

The system as described by Butler (1972) is never complete but involves continual reassessment and revision based on the results of any of the twelve steps.

The term, "task analysis" (often used in place of the term "occupational analysis"), is described by Butler as a listing of "the behavioral characteristics of the job requirements". (p.78) He claims that the best source of information for task analysis is "a sampling of the on-the-job worker" and warns against the use of supervisory and instructional personnel, or reliance on text-books, manuals or course descriptions. Butler claims that supervisory personnel are often too far removed or out of

touch with the actual tasks performed and more likely to focus on the finished product or administrative detail. Likewise, he claims that instructors often introduce a bias which reflects their need to justify their curriculum and thus avoid the need to revise their curriculum to meet training requirements.

Regarding the level or detail of analysis a publication titled Task Analysis, prepared by Annett et al (1971) for the British Department of Employment recommends that:

Analysis and training should always go together and if the results of a trial scheme are less than satisfactory it will become apparent that a more detailed analysis of some parts of the task is required. As long as analysis and training are closely linked the procedure is self-correcting. The alternative can lead to much waste of time and efforts in observations and analysis and a training program overloaded with unnecessary and probably boring detail. (p.8).

Fryklund (1965) claims that the procedure of task analysis can be applied to all areas of work besides those of a strictly mechanical pursuit. He states that:

Whether there is a project, an idea, a bill of goods sold, a nursing assignment, or a police assignment, standard elements are likely to be involved and there is something similar to a problem to be solved. The elements must be identified and listed because they are the things to be taught, not the problems. We do not teach problems; we teach the elements by applying them in typical problems (p.6).

This listing of elements of an occupation (compared to taking a store inventory by Fryklund) should form the basis for the preparation of units of instruction. Applying this procedure to the field of occupational health, the content

material for any one unit of instruction would depend on the required level of the skill which might vary according to the intended learner group i.e. nurses, physicians, hygienists.

Many writers and researchers use the terms "job analysis" and "task analysis" interchangeably and although the definitions differ in detail, most contain the basic elements of job description, task inventory, and task description.

Braden and Paul (1975) use the term 'occupational analysis' as

the means for identifying and organizing that part of instructional content which is relevant to targeted performance situations. Derivation, selection and structuring of work-like activities are all accomplished by the various procedural techniques that are grouped under the general label of occupational analysis. (p.vi).

Many of the goals or objectives of the previously discussed approaches to curriculum development have resulted in the evolution of a process that has become known as Competency Based Education. Schmieder (1973) sees Competency Based Education (CBE) as "rapidly becoming the most significant lever for educational reform since Sputnik" (p.viii). At a time when there is an inundation of new educational concepts and terminology, Competency Based Education has been heralded as one of the most influential and important developments in an effort to advance the process of education. Schmieder's book, Competency Based Education: The State of the Scene, contains the following

quotes describing CBE:

- "A multifaceted concept in search of practitioners."
- "Collection of evidence verifying the candidate's ability to perform."
- "The best management tool available to today's educators."
- "Pinpointing as accurately as possible who is responsible for what." (p. 172)

According to Alschuler and Ivey (1973) the first task in establishing a competency based educational program is the determination of:

what is relevant both to students and to society. If students are held accountable for mastery of irrelevant knowledge, they have a number of unfortunate alternatives. When students sense a discrepancy between what teachers require and what life demands, it undermines their trust in the wisdom of their teachers. (p.131)

In an attempt of clarify the concept of competence Gale and Pol (1975) claim that "No group can claim professional standing without explicit statements about what constitutes competence in that field and the means by which competence can be obtained and assessed." (p.20). The authors also note that there is no dictionary evidence of a plural form of the word "competence". Gale and Pol see that fact as:

an important conceptual problem in the competency based movement. Speaking of "competencies" as sub-parts and pieces that go to make up a total competence is just as illogical as calling

"intelligencies" pieces of an intelligence. The use of a plural suggests more than one of the same thing, not pieces of a whole. (p.20).

Despite the concern of Gale and Pole there is evidence of common usage of the term, "competencies" in current educational literature.

Two recent authors, Deane and Manuel (1977) have combined the DACUM model and the competency based educational approach to develop a process which they called the CAP System: A Five Phase System for the Development of Competency Oriented Training Programs. The first two phases of this system were adapted for this study and will be discussed in Chapter III. Future utilization of the remaining three phases which include: the development of learning objectives, the preparation of learning resources, and the establishment and management of delivery systems, would complete a systematic approach to developing a flexible modular training program.

The literature reviewed indicates that any new program of instruction must be based on a systematic approach to curriculum development to ensure that graduates of such a program are competent in the skills required to function in their chosen occupation.

Review of Literature Related to The Educational Preparation of Occupational Health Nurses

Brown (1954) reports that as early as 1945 attempts

were being made to identify the curriculum content that was related to occupational health in American Schools of Nursing. A study commissioned by the National League for Nursing (1952) examined the integration of occupational health concepts in the Yale University School of Nursing and found only one class in industrial nursing was included. The Yale program, like most baccalaureate programs, is designed to prepare a nurse with a sound general educational base rather than to prepare nurses for a specialty area of nursing.

A more extensive study funded by the U.S. Public Health Service Division of Occupational Health was conducted at Boston College by Summers (1967). The two major findings of that study were:

1. There is content in occupational health nursing that provides an essential contribution to the preparation of professional nurses; this content can be identified.
2. Fifty-six percent of the items which had been identified by one group of occupational health nurse specialists as essential or desirable content were found not to be included in the basic baccalaureate curriculum. (p.66)

Several authors, (Gray, 1966, Nelson, 1976, Brown, 1976 and Martin, 1977) have agreed that occupational health nursing is a specialty area of nursing that does require educational preparation beyond that obtained in either diploma or baccalaureate programs. The two major reasons given for this documented need are that the occupational health nurse most often works: 1) alone

without the supervision of more senior nurses or a physician and, 2) without the support of the traditional health care institutions or agencies.

According to Martin (1977) the occupational health nurse deals with two considerations beyond the scope of other types of nursing. She claims that the nurse:

must study the working environment, the potential health hazards and how these are controlled, the engineering as well as the medical controls, and what must be done if exposure occurs The business structure and behavior are alien to that with which the nurse is more familiar. The occupational health nurse must learn how to function in a setting in which health is no longer the primary concern of an establishment, but is secondary to the production of a product or provision of a service. (p. 72)

Early attempts to establish graduate level occupational health nursing programs in the United States were less than successful. Summers (1967) attributed this fact "to the difficulty, if not the impossibility, of developing a sound graduate program when the basic concepts have not been fully included in the basic programs." (p.64)

A University of Tennessee project conducted by Keller (1971) to identify occupational health content in baccalaureate nursing education included the recommendation that: "The competencies and content for the professional nurse in occupational health be continually refined and redefined as the social, technological, industrial, and health aspects of the environment change." (p.93)

To define the role and professional status of the nurse working in the field of occupational health has been the

subject of much discussion. David Rye (1978), in speaking to the annual conference of the Royal College of Nursing Society of Occupational Health Nursing, urged members to formulate objective criteria to better develop operational policies to clarify their role and thus avoid the "haphazard and ad hoc way their role had extended." (p.11)

Role expansion or role extension is a current problem for nurse educators who strive to best manipulate the variables of content, clientele, level, and need. Zornow (1977) has developed a model for curriculum development decision making regarding specific content relevant to the expanded role of the nurse within baccalaureate, graduate, and continuing education programs. Murphy (1970) sees both change processes - extension and expansion as:

evolutionary in nature in that the body of knowledge and the field of practice are constantly emerging. Moreover, both change processes are directed toward the same goal: meeting more adequately the health care needs of our society. (p.382).

She further states that:

role expansion, taken literally, implies multi-directional change. Expansion, as a process of role change, is undertaken not only to fill perceived gaps in the health care system but also to project new components or systems of health care. (p.384).

Curriculum planning for any type of nursing role expansion must make provision for some type of certification of competence. Ideally such certification should be governed by a national professional organization. In 1971 a study on Certification and Post-Secondary Education was conducted by

a commission on Post-Secondary Education in Ontario in response to the following concern:

It has frequently been suggested that our society seems almost obsessed with educational qualifications. As large scale organization, both public and private, becomes more prevalent, the need for classification of personnel (and thus for certification) seems to increase. Paper certification of educational achievements tends to become accepted uncritically as the principal indicator of "ability" or "competence". Possession of specific qualifications or certificates confers great social and financial advantage on various individuals and groups, while those who lack such credentials may find their paths toward employment and upward mobility blocked. (p.iii)

Graduates of the Occupational Health Nursing Certificate program at Grant MacEwan Community College are concerned in gaining acceptance and recognition for the certificate they receive. Meunier (1977) voices those concerns in correspondence requesting clarification of statutory regulations pertaining to College granted certificates. Those concerns would seem to reflect societal pressures to produce credentials rather than demonstrated proof of competence.

Summary

As occupational health nursing gains acceptance as a recognized specialty in nursing, it becomes increasingly important that there be an analysis of the skills required by a nurse to function effectively in the field of occupational health. This review of literature has examined the rationale for conducting an occupational analysis of occupational health nursing.

In the health care field, total program planning is required to prepare nurses to better meet the health needs of our society. More specifically, nurses working in the specialty area of occupational health must be able to demonstrate competence in essential areas of skills and knowledge if they expect to maintain the professional status they are seeking.

CHAPTER III

Methodology

This chapter outlines the methodology utilized in the development of the study. The model that was adapted for the study was developed by Deane and Manuel (1977) to facilitate the development of programs and curricula for rapidly changing technological education requirements. The model has been named the Competency Analysis Profile System (CAPS). As the name implies, the model is a systematic, analytical approach to the development of a profile of the statements of competence that may be assigned or attributed to an occupation. Although the total system is intended to consist of five distinct phases, only the first two phases were used for this study. The remaining three phases are directed at utilizing the profile developed in Phase I and II as a basis for the writing of learning objectives, preparation of learning resources, and finally the delivery of a modularized competency based educational program. The remainder of this Chapter will discuss in detail the methodology involved in completing the first two phases of the system.

Phase I

The first phase of the study was designed to answer the question: What skills and knowledge are used or perceived as relevant to the job of occupational health nursing by a representative group of practising occupational health nurses? This phase involved the listing of major categories

of competence and specific competency statements for each major category on a chart like document. This document has been referred to as a Competency Analysis Profile (CAP) by Deane and Manual (1977). The profile was developed during a three day workshop involving a group of practising occupational health nurses selected to represent all occupational health nurses in Alberta.

During the fall of 1977, the researcher met with nursing consultants from the Medical Services Branch, Alberta Department of Worker Health and Safety to select a group of nurses employed in the field of occupational health who would best represent the total occupational health nursing population in Alberta. Criteria, as outlined by Adams (1975), were established to assure the best possible cross section of all potential workplaces and group members. The criteria used in selection of the represented workplaces include the following:

1. Inclusion of major categories of workplaces. In an occupation such as occupational health nursing it was necessary to involve as group members, nurses from each major type of workplace such as petro-chemical, retail outlets, government employee health services, hospital employee health services, educational institution's student health services, and heavy industry such as construction sites or the steel industry. Each of these major categories of workplaces could require skills specific to that industry or workplace.

2. The size of the workplace. An employer of an occupational health nurse with several thousand employees may require different skills than the employer with less than 200 employees. The nurses working for the large employer may require very specialized skills such as radiography, pulmonary function testing and administrative tasks whereas the nurse working for a small firm may require an entire range of less specialized skills.
3. Geographical location of the workplace. The job expectations of a nurse working in a rural area might be influenced by the lack of other health services readily available in the urban centres. Such services might include emergency care, immunization, counselling, and family support services. Another factor that might influence the skills expected in a rural setting is the availability of continuing education or professional development courses for skill upgrading. Such courses are more accessible in urban centres.

The criteria considered in the selection of individual group members included the following:

1. Size of group. To be effective a group of eight to twelve members was planned. This size of group has been found to be most productive and allows for input from each group member, Pace and Boren (1973).
2. Competence in the occupation. Government consultants

were asked to identify competent occupational health nurses who had the following characteristics: a) employed full time, b) alert and capable of verbalizing the needs and skills of the occupation being analysed, c) capable of functioning as a group member without dominating or being dominated, d) free of bias related to qualifications or status of the occupation, and e) confident of their role and the involved skills.

3. Educational preparation. With nursing education so closely scrutinized and the wide diversity of qualifications of nurses working in occupational health, group members were chosen to represent this diversity extending from a nursing diploma to a Masters degree. Also considered was inclusion of nurses with a certificate in Occupational Health Nursing granted by one of the three major countries offering such certification: Canada, United States, and the United Kingdom.
4. Years of experience. Consideration was given to members with varying years of experience in their present and/or other occupational health nursing positions. It has been found that many skills are learned on the job and these tend to increase in quantity and specificity with increased experience. Extent of experience is also indicative of when the nurse received her original basic nursing education. As nursing education programs have changed in length and style it is expected that recent

graduates have skills different than those of graduates from nursing education programs in the 1940's and 1950's.

Utilizing all of the criteria mentioned, a group of sixteen nurses was selected to form the committee to participate in phase I. Sixteen were chosen, assuming that some would not be able to participate for any one of several reasons such as: a) family responsibility, b) inability to get release time from their job, c) lack of interest in the study and d) change of employment situation.

Before contacting the selected group it was necessary to choose a group leader who would be capable of directing the activities of a three day work session. The goal of the three days was to create the chart like profile depicting the major categories of competence and specific statements of competence required by an occupational health nurse. Ideas for the profile were to be generated by a modified brainstorming session. As any such session requires skilled leadership it was important to select a leader skilled in group dynamics. In selecting the leader, certain characteristics were considered such as: a) familiarity with the Competency Analysis Profile System, b) agreement with the system as a reliable means of completing an occupational analysis, c) ability to assist the group in defining skills, and d) ability to direct activities of the group to ensure completion of the profile in the allotted three days.

Once the leader for the Phase I portion of the study was selected, dates for the three day session were set and facilities booked. Letters with very brief details of the proposed sessions and an invitation to participate were mailed to the sixteen identified nurses. The letters as in Appendix A were followed by a phone call to clarify the request. As anticipated, five nurses were unable to participate and were sent a letter of appreciation for considering the request as included in Appendix A.

With a group of eleven practising occupational health nurses committed to the three day working session, the physical arrangements for facilities and catering were made. Letters (as in Appendix A) with confirming details were sent to each participant.

The room booked for the sessions was suitable for long periods of concentration. Lighting and ventilation were adequate with comfortable, swivel type chairs placed at long tables, slightly curved at each end. This seating arrangement allowed the participants to have an unobstructed view of the wall on which the profile was to be developed, and to have some eye contact with all group members.

Equipment required for the sessions included the following:

1. 4x8 wall board panels arranged to form a free standing work surface on which to create the profile.
2. 4x6 file cards used to list vertically the major areas of competence on the profile.

3. 3x5 file cards used to list horizontally the specific statements of competence included in each major area of competence.
4. Felt-tipped pens used to letter each file card.
5. Tacks used to adhere the file cards to the work surface.
6. A free standing flip-chart to assist the group leader in orientating the group to the activities for the three days.
7. A large coffee urn and refreshments were made available throughout each of the sessions.

Clerical assistance was obtained for the three days to process claims for expenses and salary replacement of participants and to have participants complete a questionnaire which is included as Appendix C. The clerical assistant was also responsible for writing the identified competency statements on the file cards for the profile. This allowed the group leader to more easily maintain the continuity of the group's efforts without having to stop to write out cards. As each card was written it was handed to the group leader who placed it on the developing profile.

Lunch each day was provided for the group and a reception followed the first day's session. This chance to socialize added to the group's cohesiveness and enhanced their collective commitment to completing the profile.

In the morning of the first day of the working session the researcher welcomed the group of eleven participants,

and introduced each member, the clerical assistant, and the group leader. A brief outline of plans for the three days and an orientation to the physical setting was given.

The group leader then provided an orientation to the Competency Analysis Profile system and showed participants samples of profiles that had been previously developed allowing time for the group to question procedures and to seek further clarification. The profile developed by the group was to be in addition to, or imposed on those areas of competence that a graduate nurse would be expected to have. By the end of the first morning the group had generally agreed on the major categories of competence which were listed vertically on the left side of the profile with the understanding that changes might be made as the process progressed. Each major category was labelled by a designated letter such as "A", "B", "C" for reference purposes.

As participants became more familiar with the process, there was a free exchange of ideas regarding combining or further refining the originally established major categories and identification of specific competency statements within each major category. The inclusion of any one specific competency statement could be established by any one participant without the agreement of the other participants. By the end of the first day, two of the major categories of competence were completed with cards depicting specific competency statements within each major category extended in a row horizontally from each card listing a major category

listing a major category of competence. Each specific competency statement was assigned an identifying number to ease the discussion in reference to any one specific statement.

No attempt was made to order any of the major categories of competence or specific competency statements within any category that would assign a degree of importance to any one statement. The second day of the working session saw most major areas of competence completed with specific competency statements listed for each. The third day was spent completing the rows and further refining those already completed. Blank cards were added to the profile to allow for addition of specific skills within any major category that might be identified during Phase II of the study.

The major categories of competence and specific competency statements generated during the Phase I portion of the study were reproduced in a graphical chart-like document by a computer plotting system developed at the University of Alberta by T.C. Montgomerie (1976). Each competency statement was written in a box like format, as designed by Manuel and Deane (1976) to facilitate validation of the profile by the respondents in Phase II.

Phase II

Utilizing the profile created during Phase I, this phase of the study was designed to answer two questions: To what extent do all occupational health nurses in Alberta agree with the skills and knowledge identified by the

representative group? and Where were the identified skills and knowledge acquired? Referred to as the "Validation Phase" by Manuel and Deane (1976), the original intent of this phase was to ascertain the extent of agreement with the original profile by surveying all known occupational health nurses employed in Alberta. This phase of the study was necessitated by the wide diversity of workplaces and role expectations for occupational health nurses. Although the group involved in Phase I of the study was thought to be representative of the total population, Manuel and Deane (1976) are adamant in the need to ... "expose the profile to a larger sample of the occupation for its review and criticism. A small group, no matter how carefully chosen, cannot be expected to have total insight into an entire occupation". (p. 5)

As further information regarding the acquisition of the identified statements of competence was also required, it was necessary to change the original profile format designed by Manuel and Deane (1976).

The profile was printed in black ink on 22" x 32" bright yellow heavy bond paper. The profile when folded displayed a graphic representation of an occupational health nurse on the cover. Further information on the profile included a list of participants involved in Phase I and an explanation of the profile as shown in Appendix E.

Explanation of Profile

As shown in Figure 1, major categories of competence

were listed vertically in a box format on the left side of the profile with each category assigned an identification letter.

The specific competency statements within each major category were listed horizontally in a box format with each statement assigned an identifying number as shown in Figure 2.

Beneath each competency statement, space was provided for validation responses as shown in Figure 3.

Respondents were asked to indicate if they use the competency as stated in the box. If they circled "yes" (Y), they were asked to circle the response which best described where they had acquired the skill: in a diploma nursing program (RN), on the job (JOB), or in some form of advanced training beyond a diploma nursing program, (ADV).

If respondents did not use the competency as stated in the box they were asked to circle "no" (N), and were to make a judgment regarding the relevance of that competency to their job. They could indicate that the competency was not relevant (N/R) because there was no such hazard or it was the responsibility of another member of the occupational health team, or, they could indicate that it was relevant (R) but not used for some reason such as: requiring additional training, or not considered part of the occupational health nurse's role by the employer.



Figure 1. Box format designed to indicate major categories of competence.

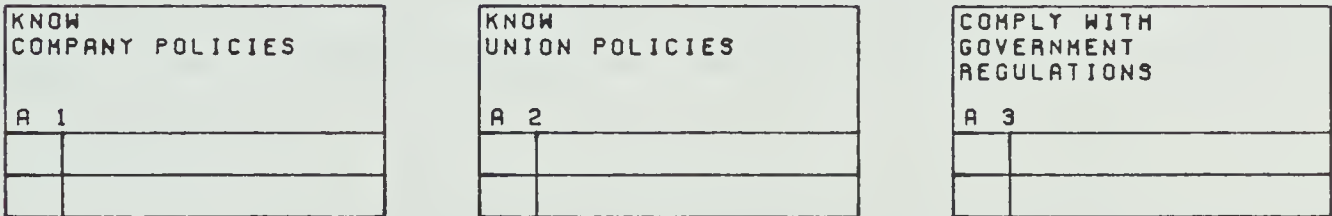


Figure 2. Box format designed to indicate specific statements of competence.

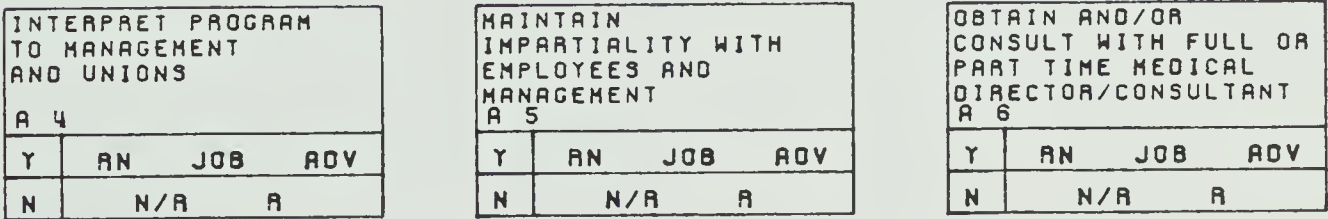


Figure 3. Box format designed to facilitate the validation process.

This format, then, for attaining the required information was programmed on a computer plotting system by Montgomerie (1978). The major categories of competence and specific competency statements as identified during Phase I were plotted by the computer to produce the profile to be used as the test instrument for the validation phase.

The profile was used in a pilot study involving ten nurses, familiar with occupational health terminology, but not qualified to participate in the final validation phase because of being unemployed, or employed in instructional and/or consultant roles. Results of the pilot study led to very minor revisions in the wording of the directions to add clarification.

The letter requesting participation in the validation phase (included in Appendix A) and directions for completing the profile (as included in Appendix B) were distributed by mail to the 220 occupational health nurses as identified by the Medical Services Branch, Alberta Workers Health, Safety and Compensation. Three weeks after the initial mailing, phone call reminders were made to the occupational health nurses who had not responded.

Summary

This study consisted of two main phases: Phase I which involved a three day working session using a modified brainstorming technique to create a graphical representation of the major categories of competence and specific statements of competence required by occupational health

nurses; and Phase II which involved the validation of the document developed during Phase I. The test instrument took the form of a large chart-like document referred to as a "Competency Analysis Profile" by Manuel and Deane (1976). These profiles were distributed to all 220 practising occupational health nurses in Alberta including the participants in Phase I. Responses were tabulated by computer and are reported in Chapter IV.

CHAPTER IV

Findings of the Study

This chapter will initially discuss the demographic data of the eleven occupational health nurses who participated in the Phase I portion of the study compared with the one hundred and forty respondents involved in Phase II of the study. The competency analysis profile as developed by the Phase I working group is included in the format it was distributed for the Phase II validation process. The profile lists the skills and knowledge used or perceived as relevant to the job of occupational health nursing.

The data gathered in Phase II that relates to the use and relevance of each major category of competence is reported in graphical form. The final validated competency analysis profile is presented with the major categories of competence and specific competency statements re-ordered to reflect the extent of agreement with the profile as developed during Phase I of the study.

Further data that relates to the acquisition of the skills and knowledge in each major category of competence is presented in tabular form.

Demographic Characteristics

Participants for Phase I of the study were selected to represent all occupational health nurses working in Alberta. The criteria established for the selection was described in the previous chapter. Tables one to five contain the

demographic data for the Phase I working group and the respondents in Phase II. Of the 220 profiles mailed out for validation, 149 responses were returned giving a response rate of 68%. Of the 149 profiles returned, nine were completed incorrectly and could not be tabulated, leaving the validation phase based on 140 responses.

Table 1 reported the types of workplaces represented by participants in the study. The types of workplaces grouped together in the "other" category included meat packing plants, manufacturing, and correctional institutions. The lowest rate of return was from nurses working in jails or correctional institutions. This may have been because this group of nurses traditionally have little (if any) responsibility for the health of the institution's employees but deal mainly with inmates and therefore do not see themselves as occupational health nurses.

Table 2 reports the participants years of experience in occupational health nursing. Traditionally, there has been a very low turnover rate in occupational health nursing positions with the average length of time spent with one employer much higher than the national average for nurses working in health care institutions. These findings are similar to those reported in a study commissioned by the Ontario Occupational Health Nurses Association (1975).

If it is assumed that most nurses graduate from their diploma nursing program at the age of 21 years, Table 3 indicates that over 50% of the respondents were more than 40

TABLE 1

Type of Workplace Represented by Participants

Type of Workplace	Phase I Participants	Phase II Respondents
Government Employee Service	1	22
Hospital Employee Service	1	14
Petro-Chemical	2	20
Educational Institution	2	17
Retail Outlet	1	26
Heavy Industry	2	21
Other	2	20
Total	11	140

TABLE 2

Years of Experience In Occupational Health Nursing

Years of Experience	Phase I Participants	Phase II Respondents
0 - 1	0	11
1 - 5	3	64
5 - 10	3	25
10 +	5	30
Information missing	0	10
Total	11	140

years old. Again, this is indicative of occupational health nursing positions being held by nurses much older than those working in the more traditional nursing roles.

TABLE 3

Year of Graduation from Diploma Nursing		
Year	Phase I Participants	Phase II respondents
1940-1950	4	38
1951-1960	3	45
1961-1970	3	36
1971 +	1	12
Information Missing	0	9
Total	11	140

Table 4 reports the level of education of participants beyond a basic nursing diploma. The fact that more than 60% of the respondents have some form of education beyond a basic nursing diploma indicates that the respondents have made an attempt to increase their skills and knowledge as required to function as an occupational health nurse.

Table 5 reports the number of employees in workplaces represented by participants. Alberta legislation requires that any employer who employs more than 200 workers at a workplace at one time must employ a nurse but present legislation does not specify an upwards limit of employees for whom a nurse should be responsible. A majority of Alberta workers are employed at workplaces with fewer than 200 workers so do not have the occupational health services.

TABLE 4

Education Beyond Basic Nursing Diploma

Educational Level	Phase I Participants	Phase II Respondents
Baccalaureate Degree	1	17
Occupational Health Nursing Certificate	5	23
Other	1	46
None	4	45
Information Missing	0	9
Total	11	140

TABLE 5

Number of Employees in Represented Workplaces

Number of Employees in Workplace	Phase I Participants	Phase II Respondents
0 - 500	3	24
501 - 1,000	4	70
1001 - 2,000	1	15
2,000 +	3	22
Information Missing	0	9
Total	11	140

Phase I-Profile Development

A photo reduced copy of the chart like document listing the skills and knowledge that are used or perceived as relevant to the job of occupational health nursing as developed by the Phase I participants is presented as Figure 4.

It should be noted that no special significance was attributed to the ordering of major categories of competence nor specific competency statements within any major category. The final empty box in each major category was included to encourage Phase II respondents to add any additional statements of competence that might have been overlooked by the Phase I participants.

Phase II-Validation

Phase II of the study was designed to answer two major questions. The first question was; to what extent do all occupational health nurses in Alberta agree with the skills and knowledge identified by the representative group selected to participate in Phase I? Agreement was considered to include respondents who reported use of the competency or perceived the competency to be relevant to the job of occupational health nursing. To tabulate the level of agreement for each competency statement the responses that indicated use(Y) of the competency and responses that indicated perceived relevance(R) of the competency were combined. Tabulation was done by frequency count and the

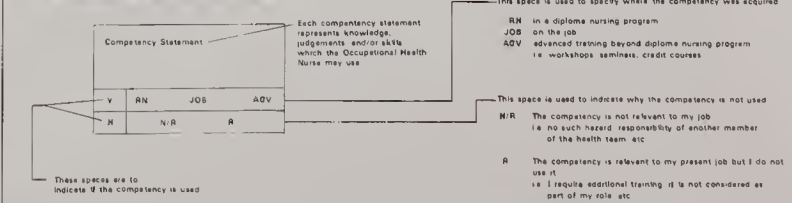
Figure 4. Competency Analysis Profile for Occupational Health Nurses as developed by Phase I participants.

OCCUPATIONAL HEALTH NURSING

COMPETENCY ANALYSIS PROFILE

A**OCCUPATIONAL
HEALTH PROGRAM
DEVELOPMENT****KNOW COMPANY POLICIES**
A 1
T AN JOB ADV
N N/A A**KNOW UNION POLICIES**
A 2
T AN JOB ADV
N N/A A**COMPLY WITH
GOVERNMENT
REGULATIONS**
A 3
T AN JOB ADV
N N/A A**INTERPRET PROGRAM
IN MANAGEMENT
AND UNIONS**
A 4
T AN JOB ADV
N N/A A**MAINTAIN
IMPARTIALITY WITH
EMPLOYEES AND
MANAGEMENT**
A 5
T AN JOB ADV
N N/A A**OBTAIN AND/OR
CONSULT WITH FULL OR
PART TIME MEDICAL
DICTION/CONSULTANT**
A 6
T AN JOB ADV
N N/A A**DESIGN PHYSICAL
FACILITIES**
A 7
T AN JOB ADV
N N/A A**PLAN PROGRAM
POLICIES**
A 8
T AN JOB ADV
N N/A A**PLAN PROGRAM
PROCEDURES**
A 9
T AN JOB ADV
N N/A A**PREPARE A POLICY
AND PROCEDURE
MANUAL**
A 10
T AN JOB ADV
N N/A A**ESTABLISH
SCREENING
PROCEDURES**
A 11
T AN JOB ADV
N N/A A**LAISE WITH
SAFETY COMMITTEE**
A 12
T AN JOB ADV
N N/A A**PARTICIPATE
IN ACCIDENT
PREVENTION**
A 13
T AN JOB ADV
N N/A A**B****WORK
ENVIRONMENT
SURVEILLANCE****IDENTIFY POTENTIAL
HARMFUL
PROCESSES AND
PRODUCTS**
B 1
T AN JOB ADV
N N/A A**APPLY PRINCIPLES
OF INDUSTRIAL
HYGIENE IN MAKING
A PLANT SURVEY**
B 2
T AN JOB ADV
N N/A A**APPLY PRINCIPLES
OF ERGONOMICS**
B 3
T AN JOB ADV
N N/A A**KNOW EMPLOYEE
JOB DESCRIPTIONS**
B 4
T AN JOB ADV
N N/A A**ADAPTATION HEALTH
OF EMPLOYEES
AT RISK**
B 5
T AN JOB ADV
N N/A A**KNOW THRESHOLD
LIMIT VALUES
STLV'S**
B 6
T AN JOB ADV
N N/A A**KNOW HEALTH
AND SAFETY
REGULATIONS**
B 7
T AN JOB ADV
N N/A A**TAKE AN AIR
SAMPLE**
B 8
T AN JOB ADV
N N/A A**TAKE A DUST
SAMPLE**
B 9
T AN JOB ADV
N N/A A**TEST SOUND LEVELS**
B 10
T AN JOB ADV
N N/A A**DEVELOP A
HEARING CONSERVATION
PROGRAM**
B 11
T AN JOB ADV
N N/A A**PARTICIPATE IN
HEALTH AND SAFETY
PRODUCTION**
B 12
T AN JOB ADV
N N/A A**PARTICIPATE
IN ACCIDENT
PREVENTION**
B 13
T AN JOB ADV
N N/A A**C****DISASTER
PLANNING****PARTICIPATE
IN DISASTER PLANNING
COMMITTEE**
C 1
T AN JOB ADV
N N/A A**IDENTIFY POTENTIAL
DISASTERS**
C 2
T AN JOB ADV
N N/A A**DESIGN A
DISASTER PLAN
AND PROCEDURES**
C 3
T AN JOB ADV
N N/A A**ACQUIT AND
TRAIN
RESCUE
PERSONNEL**
C 4
T AN JOB ADV
N N/A A**USE
PROTECTIVE AND
RESCUE
EQUIPMENT**
C 5
T AN JOB ADV
N N/A A**LAISE WITH
LOCAL EMERGENCY
SERVICES**
C 6
T AN JOB ADV
N N/A A**PARTICIPATE IN
DISASTER
SIMULATION
EXERCISES**
C 7
T AN JOB ADV
N N/A A**REVIEW AND
REVISE DISASTER
PLAN AND
PROCEDURES**
C 8
T AN JOB ADV
N N/A A**TEST
C 9
T AN JOB ADV
N N/A A****D****HEALTH
ASSESSMENT****DEMONSTRATE
SPECIFIC
OBSERVATION
SKILLS**
D 1
T AN JOB ADV
N N/A A**DESCRIBE
OCCUPATIONAL
DISEASE
CONDITIONS**
D 2
T AN JOB ADV
N N/A A**COMPILE A
COMPREHENSIVE
HEALTH
HISTORY**
D 3
T AN JOB ADV
N N/A A**PERFORM A
PHYSICAL
EXAMINATION**
D 4
T AN JOB ADV
N N/A A**PERFORM
RANGE-OF-MOTION
ASSESSMENT**
D 5
T AN JOB ADV
N N/A A**OPERATE
DIAGNOSTIC
EQUIPMENT**
D 6
T AN JOB ADV
N N/A A**PERFORM
PULMONARY
FUNCTION
TESTING**
D 7
T AN JOB ADV
N N/A A**APPLY KNOWLEDGE
OF CULTURAL
DIFFERENCES IN
TESTING**
D 8
T AN JOB ADV
N N/A A**PERFORM
AUDIOMETRIC
TESTING**
D 9
T AN JOB ADV
N N/A A**PERFORM
VISION
TESTING**
D 10
T AN JOB ADV
N N/A A**PERFORM
E.G.G.S**
D 11
T AN JOB ADV
N N/A A**COLLECT AND
PREPARE
LAB. SPECIMENS
(SPE. BLOOD, URINE)**
D 12
T AN JOB ADV
N N/A A**PERFORM
PRE-PLACEMENT
SCREENING
PROCEDURES**
D 13
T AN JOB ADV
N N/A A**E****EMERGENCY
CARE****ASSESS
SITUATION**
E 1
T AN JOB ADV
N N/A A**IDENTIFY SIGNS AND SYMPTOMS
OF TOXICITY**
E 2
T AN JOB ADV
N N/A A**ESTABLISH
CAUSALITY
DIAGNOSIS**
E 3
T AN JOB ADV
N N/A A**ADMINISTER
CARDIO-PULMONARY
RESUSCITATION**
E 4
T AN JOB ADV
N N/A A**ADMINISTER
FIRST AID**
E 5
T AN JOB ADV
N N/A A**USE
EMERGENCY
EQUIPMENT (I.E.
OXYGEN, A&B, BAG)**
E 6
T AN JOB ADV
N N/A A**ADMINISTER
LIFE SUPPORT**
E 7
T AN JOB ADV
N N/A A**USE
MECHANICAL
VENTILATORS**
E 8
T AN JOB ADV
N N/A A**SUPERVISE
RESCUE OF
CASUALTIES**
E 9
T AN JOB ADV
N N/A A**DETERMINE
FURTHER
ACTION**
E 10
T AN JOB ADV
N N/A A**INFORM HOSPITAL,
MANAGEMENT, NEXT-OF-
KIN (AS REQUIRED)**
E 11
T AN JOB ADV
N N/A A**INITIATE
INVESTIGATION
OF ACCIDENT**
E 12
T AN JOB ADV
N N/A A**TEST
E 13
T AN JOB ADV
N N/A A****F****TREATMENT
SERVICE****ACQUIT WITHIN
LEGAL AND
PROFESSIONAL
PARAMETERS**
F 1
T AN JOB ADV
N N/A A**STANDARDIZE
TREATMENT
PROCEDURES**
F 2
T AN JOB ADV
N N/A A**TREAT
MINOR
INJURIES**
F 3
T AN JOB ADV
N N/A A**TREAT
MINOR
ILLNESSES**
F 4
T AN JOB ADV
N N/A A**PROVIDE
ON-DUTY
TREATMENTS**
F 5
T AN JOB ADV
N N/A A**MAKE REFERRALS
(AS REQUIRED)**
F 6
T AN JOB ADV
N N/A A**DISPENSE
DRUGS**
F 7
T AN JOB ADV
N N/A A**STANDBY
EARS**
F 8
T AN JOB ADV
N N/A A**UPDATE
IMMUNIZATION
STATUS
EMPLOYEES**
F 9
T AN JOB ADV
N N/A A**ASSIST WITH
REHABILITATION
OF RETURNING
EMPLOYEES**
F 10
T AN JOB ADV
N N/A A**TEST
F 11
T AN JOB ADV
N N/A A****G****EMPLOYEE
COUNSELLING****COMMUNICATE
EFFECTIVELY**
G 1
T AN JOB ADV
N N/A A**CONDUCT
INTERVIEWS**
G 2
T AN JOB ADV
N N/A A**LISTEN
EFFECTIVELY**
G 3
T AN JOB ADV
N N/A A**INTERPRET
BODY
LANGUAGE**
G 4
T AN JOB ADV
N N/A A**IDENTIFY
SPECIFIC
PROBLEM**
G 5
T AN JOB ADV
N N/A A**APPLY
PRINCIPLES
OF PSYCHOLOGY**
G 6
T AN JOB ADV
N N/A A**APPLY
PRINCIPLES
OF INDUSTRIAL
PSYCHOLOGY**
G 7
T AN JOB ADV
N N/A A**RESPECT
HUMAN
RIGHTS**
G 8
T AN JOB ADV
N N/A A**ADVISE
ON CONSUMER RIGHTS
RELATED HEALTH CARE**
G 9
T AN JOB ADV
N N/A A**ADVISE
ON DRUG/ALCOHOL
RELATED PROBLEMS**
G 10
T AN JOB ADV
N N/A A**TEST
G 11
T AN JOB ADV
N N/A A****H****HEALTH
EDUCATION****KNOW CHARACTERISTICS
OF ADULT LEARNERS**
H 1
T AN JOB ADV
N N/A A**IDENTIFY PROBLEMS
SUITABLE FOR
HEALTH EDUCATION**
H 2
T AN JOB ADV
N N/A A**ESTABLISH
OBJECTIVES FOR
HEALTH EDUCATION
PROGRAMS**
H 3
T AN JOB ADV
N N/A A**SELECT APPROPRIATE
RESOURCE PEOPLE
AND/OR MATERIALS**
H 4
T AN JOB ADV
N N/A A**SPEAK IN PUBLIC**
H 5
T AN JOB ADV
N N/A A**GIVE A
DEMONSTRATION**
H 6
T AN JOB ADV
N N/A A**SELECT APPROPRIATE
READING MATERIALS
FOR INDIVIDUAL
HEALTH EDUCATION**
H 7
T AN JOB ADV
N N/A A**PUBLICIZE
PROGRAMS**
H 8
T AN JOB ADV
N N/A A**TEST
H 9
T AN JOB ADV
N N/A A****I****RECORD
KEEPING****DESIGN
RECORD KEEPING
SYSTEM**
I 1
T AN JOB ADV
N N/A A**ADMINISTER
CONFIDENTIALITY**
I 2
T AN JOB ADV
N N/A A**MAINTAIN AND
REVISE RECORDS**
I 3
T AN JOB ADV
N N/A A**RECORD
INFORMATION
IN DETAIL**
I 4
T AN JOB ADV
N N/A A**RETRIEVE
DATA FROM
RECORDS**
I 5
T AN JOB ADV
N N/A A**EVALUATE
DATA FROM
RECORDS**
I 6
T AN JOB ADV
N N/A A**ASSESS
IMPLICATIONS OF
INFORMATION
OBTAINED**
I 7
T AN JOB ADV
N N/A A**PREPARE AND
SUBMIT
REPORTS**
I 8
T AN JOB ADV
N N/A A**UTILIZE
COMPUTER
SYSTEMS**
I 9
T AN JOB ADV
N N/A A**PARTICIPATE
IN RESEARCH**
I 10
T AN JOB ADV
N N/A A**TEST
I 11
T AN JOB ADV
N N/A A****J****PROGRAM
ADMINISTRATION****APPLY
MANAGERIAL
SKILLS**
J 1
T AN JOB ADV
N N/A A**DETERMINE
STAFFING
NEEDS**
J 2
T AN JOB ADV
N N/A A**PREPARE
JOB DESCRIPTIONS
FOR HEALTH PROGRAM
STAFF**
J 3
T AN JOB ADV
N N/A A**SELECT
STAFF**
J 4
T AN JOB ADV
N N/A A**SUPERVISE
STAFF**
J 5
T AN JOB ADV
N N/A A**EVALUATE AND
APPRAISE
STAFF
PERFORMANCE**
J 6
T AN JOB ADV
N N/A A**ARRANGE FOR
STAFF
DEVELOPMENT**
J 7
T AN JOB ADV
N N/A A**PREPARE A
BUDGET**
J 8
T AN JOB ADV
N N/A A**SELECT AND ORDER
SUPPLIES AND
EQUIPMENT**
J 9
T AN JOB ADV
N N/A A**SCHEDULE
CLERICAL
MAINTENANCE**
J 10
T AN JOB ADV
N N/A A**ESTABLISH AND
MAINTAIN
INFECTION-CONTROL
PROGRAM**
J 11
T AN JOB ADV
N N/A A**PRACTICE CLERICAL
SKILLS AS REQUIRED
FOR RECORD KEEPING**
J 12
T AN JOB ADV
N N/A A**MAINTAIN
SECURITY
(DRUGS, FILES)**
J 13
T AN JOB ADV
N N/A A**K****PROFESSIONAL
GROWTH****RECOGNIZE NEED
FOR CONTINUING
EDUCATION**
K 1
T AN JOB ADV
N N/A A**BELONG TO PROFESSIONAL
ORGANIZATIONS**
K 2
T AN JOB ADV
N N/A A**SELECT REFERENCE
MATERIALS**
K 3
T AN JOB ADV
N N/A A**STUDY CURRENT
PROFESSIONAL
LITERATURE**
K 4
T AN JOB ADV
N N/A A**PARTICIPATE IN
SYMPOSIUMS, SEMINARS,
CONFERENCES, AND
CONVENTIONS**
K 5
T AN JOB ADV
N N/A A**EVALUATE
SELF**
K 6
T AN JOB ADV
N N/A A**PROMOTE
PROFESSIONAL
OCCUPATIONAL
HEALTH**
K 7
T AN JOB ADV
N N/A A**TEST
K 8
T AN JOB ADV
N N/A A**

EXPLANATION OF PROFILE



results presented in graphical form for each major category showing the total relevance for each competency statement. Total relevance then, represents the combined responses reporting use of each competency and the perceived relevance of each competency even tho the competency was not reported as used. The percentage distribution of all validation responses is included in Appendix D.

Factors that might have influenced the level of agreement include: number of employees at worksite number of occupational health nurses providing the service, process or production of the workplace, geographical location of the worksite, space and budget limitations of the occupational health service and the labour-management relations at the worksite.

Figure 5 graphically represents the level of agreement for the first major category - "A" - Occupational Health Program Development.

Within each major category the level of agreement varies for specific competency statements. In category "A" the first competency statement A1 - Know Company Policies, shows a 99% level of agreement with the Phase I profile. The total relevance, then, for that competency is 99%. The breakdown of that total relevance into the percentage distribution of respondents who reported use(Y) and perceived relevance(R) is found in Appendix D.

Figure 6 represents category "B"-Work Environment Surveillance. This category shows a wide variation in the

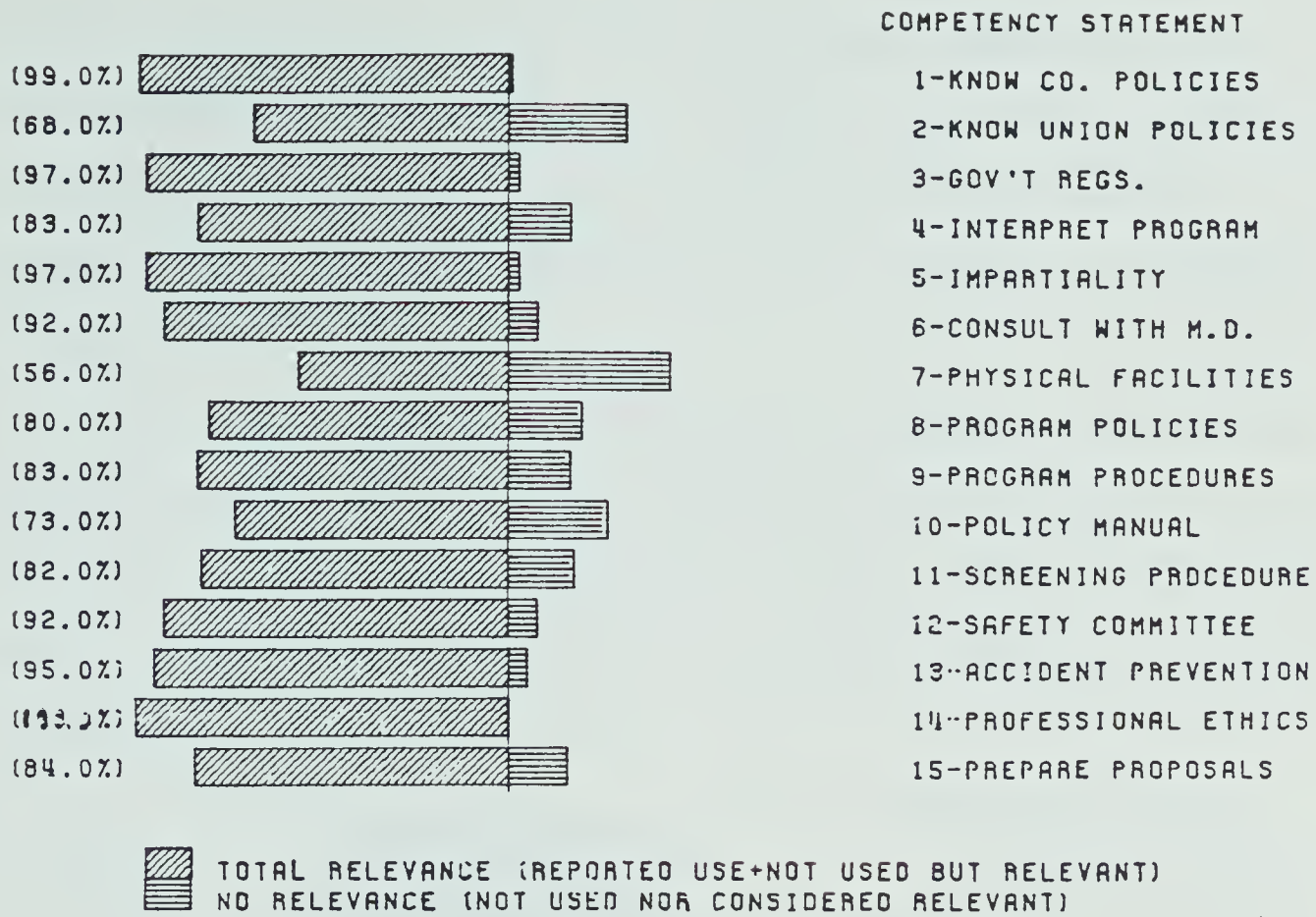


Figure 5. Total relevance of category "A" - Occupational Health Program Development.

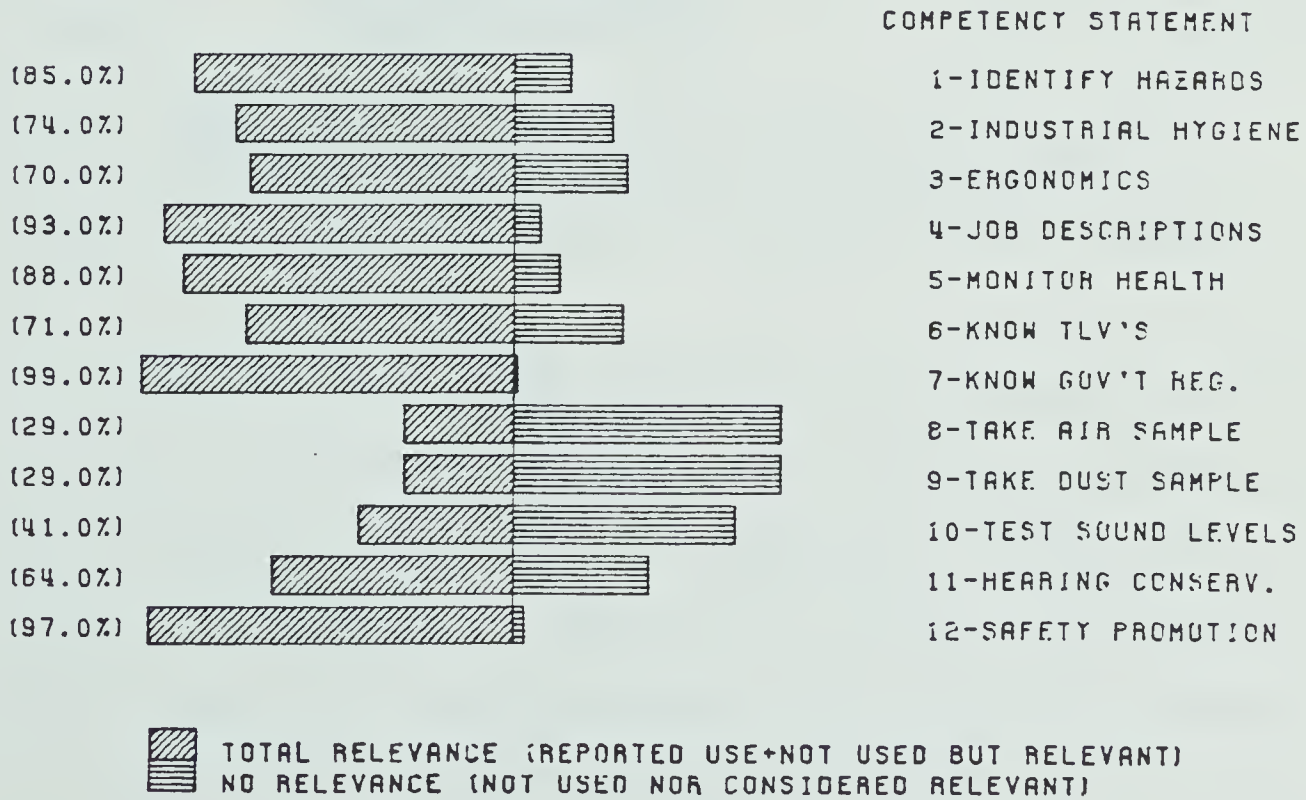


Figure 6. Total relevance of category "B" - Work Environment Surveillance.

level of agreement with 99% respondents agreeing with statement E-7 Know Government Regulations, and only 29% of respondents reporting use or perceived relevance of competency statements E-8 Take an Air Sample and B-9 Take a Dust Sample.

Figure 7 represents category "C"-Disaster Planning. This category shows a lower overall level of agreement than the two previous categories. Six of the specific statements in this category show a 50%-70% agreement with the original profile.

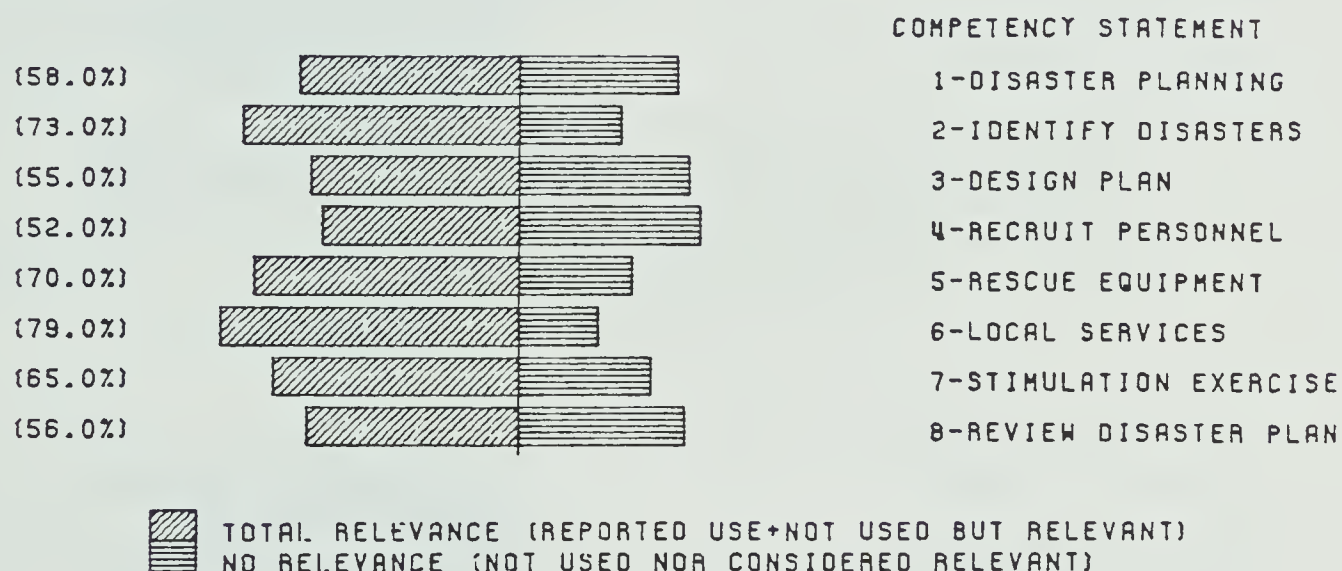


Figure 7. Total relevance of category "C" - Disaster Planning.

Category "D"-Health Assessment is presented graphically in Figure 8. Five of the seventeen competency statements in this category show a level of agreement of more than 90% with two statements D-7 Pulmonary Function Testing and D-11 Taking Electrocardiograms showing less than 60% agreement.

Figure 9 represents the major category "E"-Emergency Care. Three of the specific statements in this category show

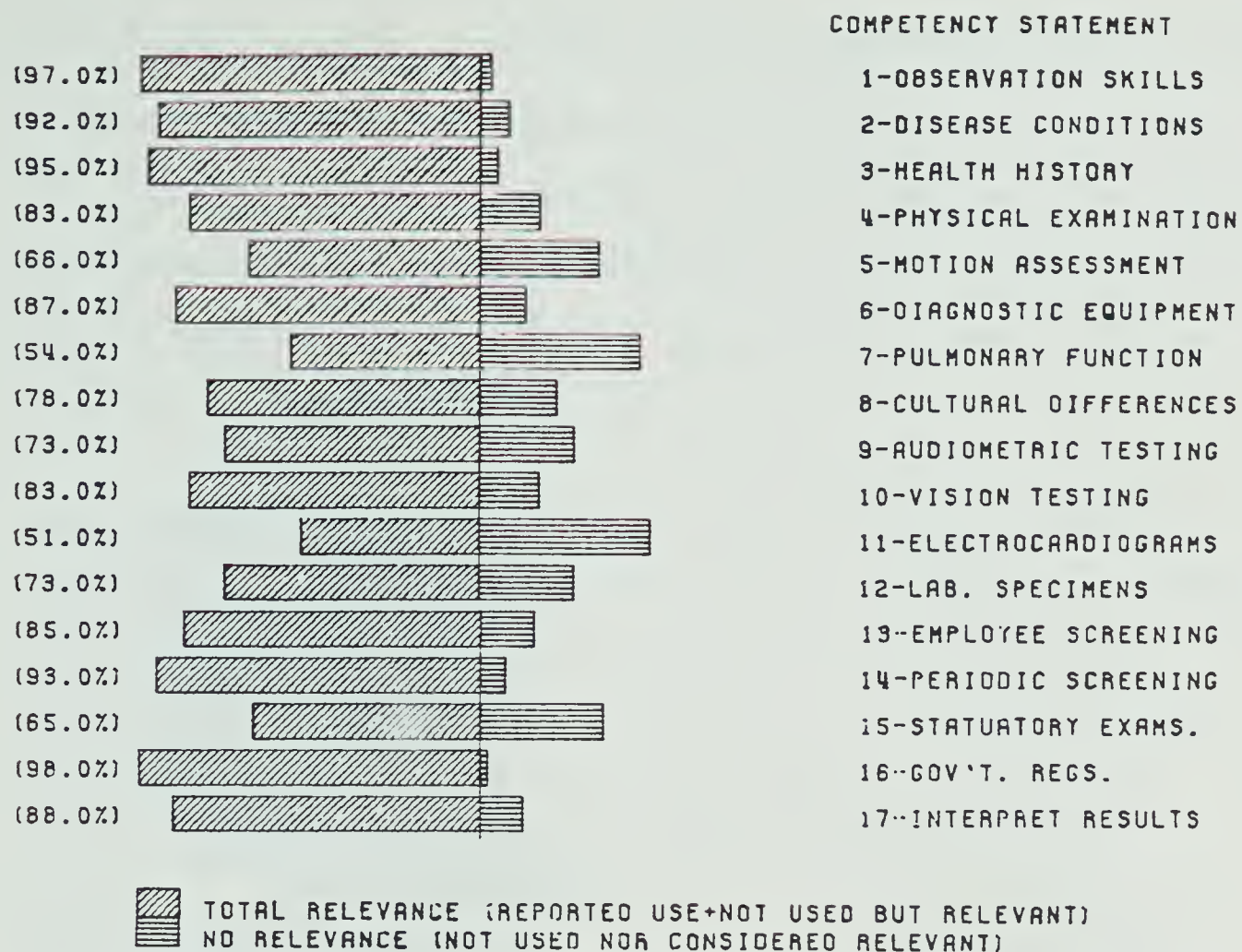


Figure 8. Total relevance of category "D" - Health Assessment.

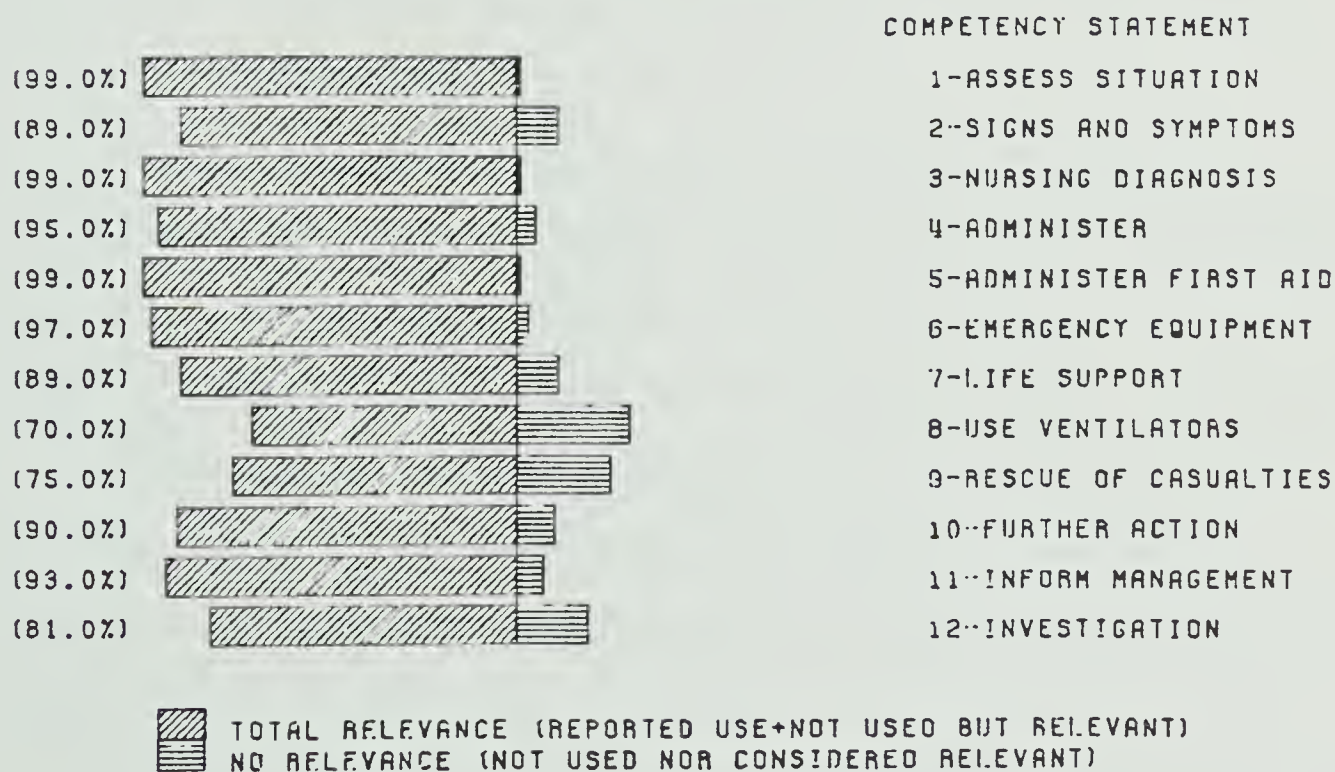


Figure 9. Total relevance of category "E" - Emergency Care.

an agreement of 99%, and only two statements fall below 80% agreement, E-8 Use Ventilators and E-9 Rescue Casualties.

Category "F"-Treatment Services is presented in Figure 10. A general high level of agreement is displayed in this category with seven out of ten statements showing a level above 90% agreement.

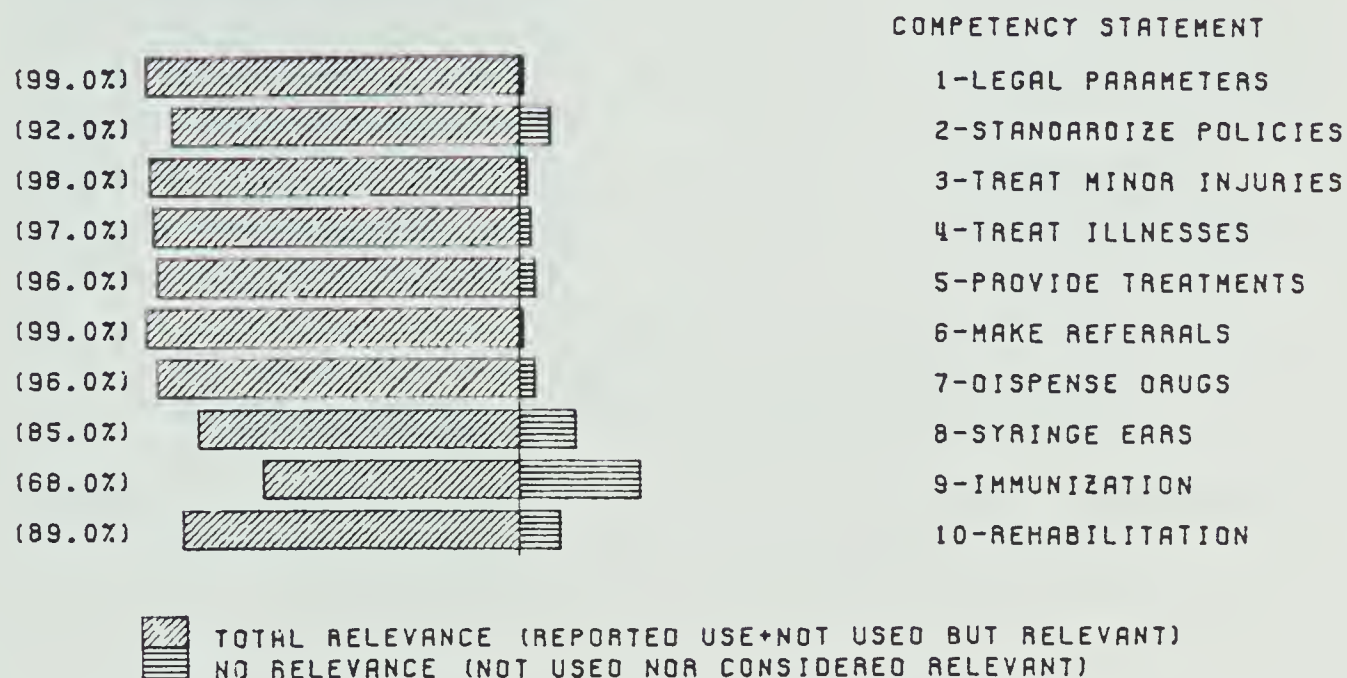


Figure 10. Total relevance of Category "F" - Treatment Services.

Figure 11 depicts the major category "G"-Employee Counselling which again shows a very high level of agreement with four statements reported as 100% agreement and only three statements at a level below 95% agreement.

Category "H"-Health Education is presented as Figure 12. The level of agreement for all specific statements within this category are evenly distributed between 84% and 95%.

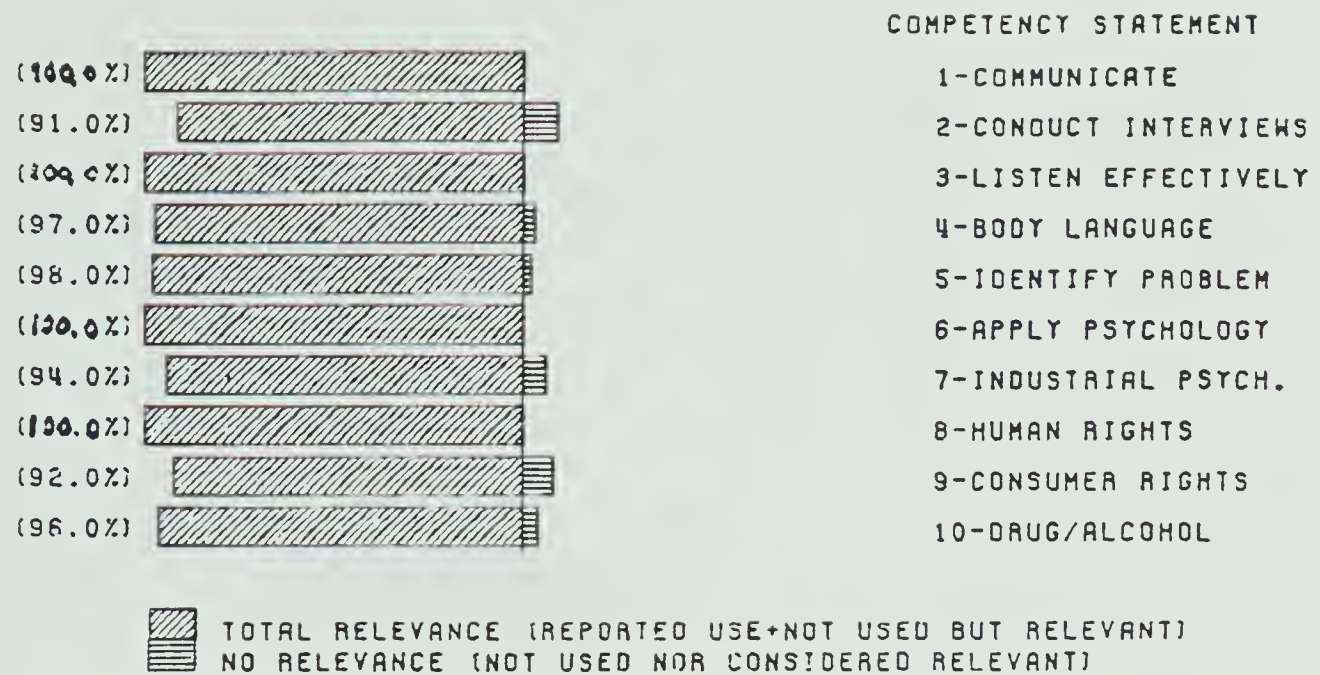


Figure 11. Total relevance of Category "G" - Employee Counseling.

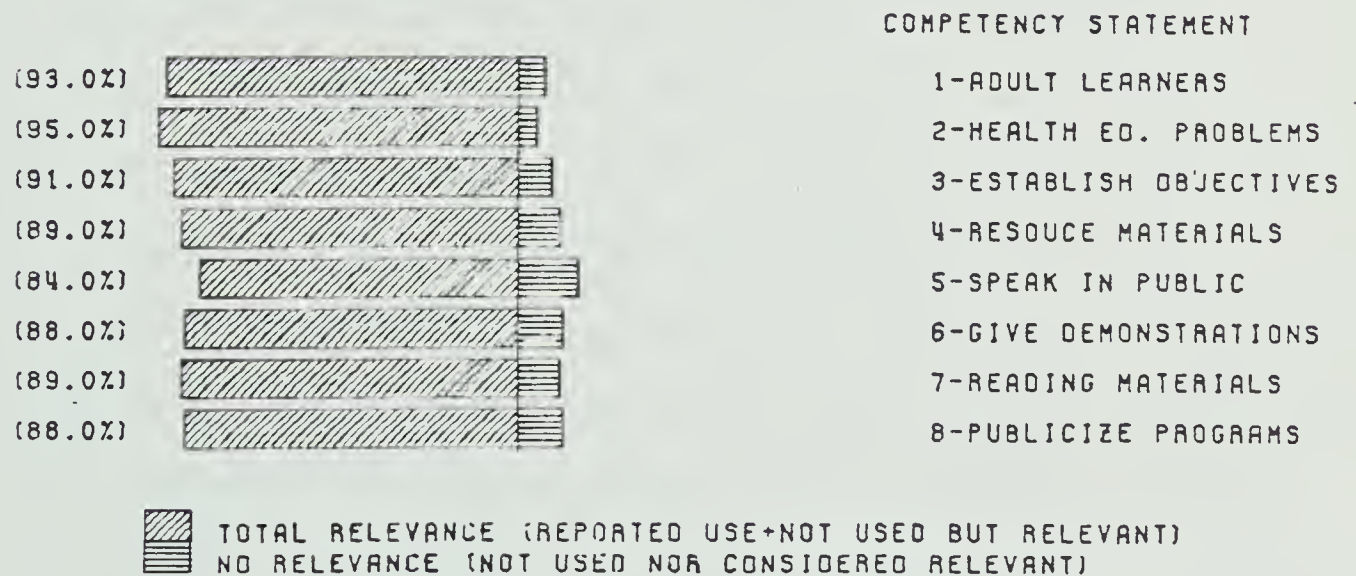


Figure 12. Total relevance of Category "H" - Health Education.

Figure 13 represents the Category "I"-Record Keeping. Again there is a wide variation in the extent of agreement

with 100% of respondents agreeing with the statements, I 2 Maintain Confidentiality and only 55% of respondents reporting use or relevance of the statement, I,9 Utilize Computer Systems.

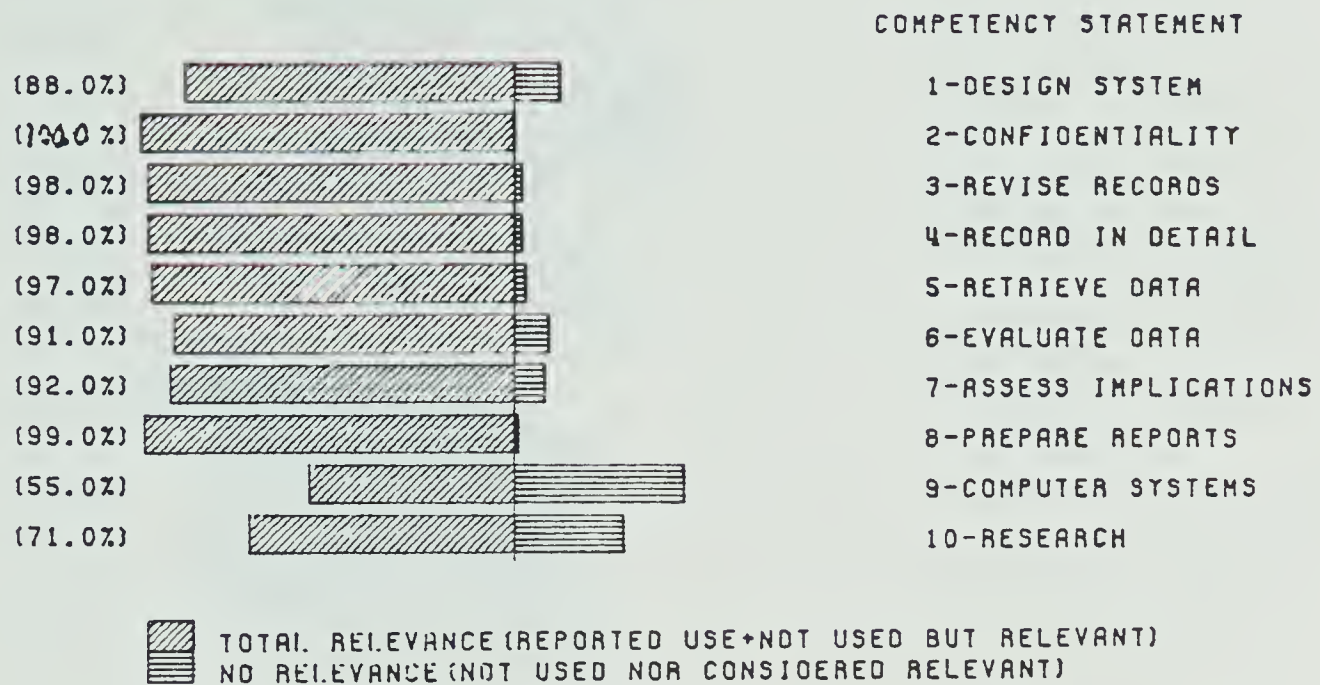


Figure 13. Total relevance of Category "I" - Record Keeping.

Category "J"-Program Administration is depicted by Figure 14. The responses for this category, more than any other, would be influenced by the factors relating to size of the workplace and the number of staff involved in providing occupational health services. The four statements referring to staff supervision: J4-Select Staff, J6-Evaluate Staff, J7-Plan Staff Development, and J8-Prepare a Budget all fall below a level of agreement of 60%.

The last major category "K"-Professional Growth is shown as Figure 15. Again it has a very high general level of agreement with all seven competency statements showing a level of agreement above 93%.

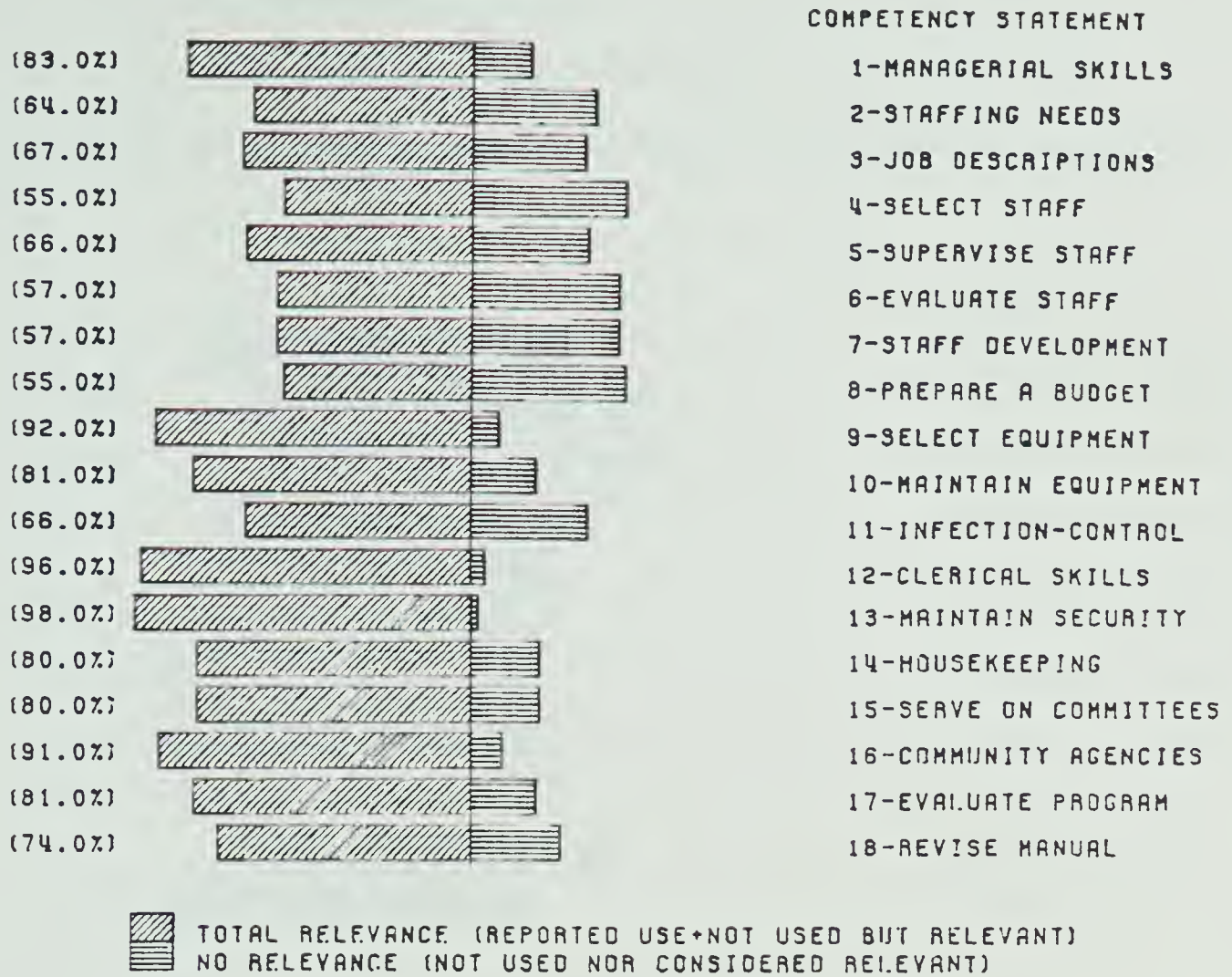


Figure 14. Total relevance of category "J" - Program Administration.

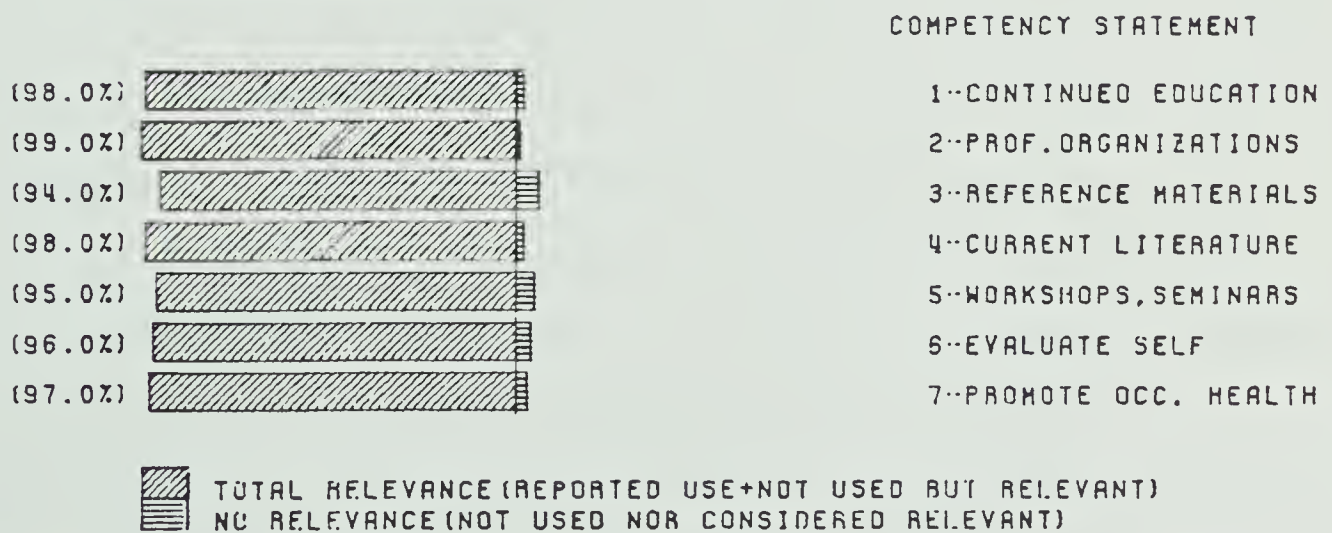


Figure 15. Total relevance of category "K" - Professional Growth.

Having presented all major categories separately a summary of the average total relevance and level of agreement with the original profile is presented as Figure 16.

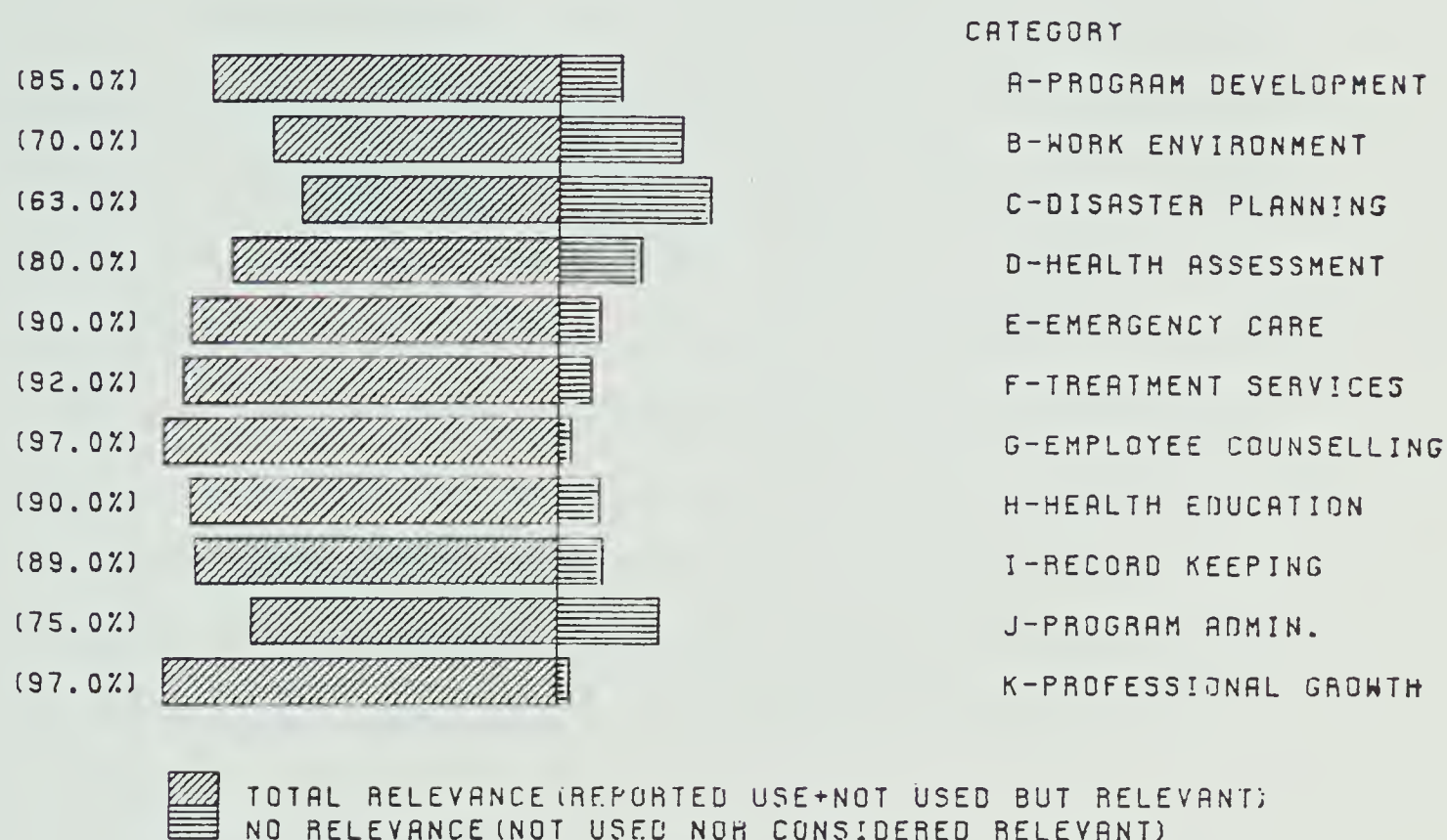


Figure 16. The average total relevance for the validated profile.

The two major categories showing the highest average level of agreement with the original Phase I profile are Category G - Employee Counselling and Category K - Professional Growth which both show an average level of agreement of 97%. Three major categories: B-Work Environment Surveillance, C-Disaster Planning, and J-Program Administration show an average level of agreement of 75% or less. The average level of agreement for the validated profile is 84%.

Phase II-Acquisition of Competence

The second question at issue in Phase II was directed at respondents who reported use of the specific competency statements. This group of respondents were asked the question; where were the identified skills and knowledge acquired? They were given a choice of three responses: in a diploma nursing program (RN), on the job (JOB), or in some form of advanced training beyond a diploma nursing program (ADV). Again, tabulation was by frequency count with the two responses, (JOB) and (ADV) indicating acquisition beyond a basic diploma nursing program, being combined. The results are presented in tabular form for each major category. The percentage distribution of respondents who reported acquisition as (JOB) or (ADV) is included in Appendix D.

Table 6 reports the findings for Category "A"-Occupational Health Program Development. In this category, the tabulation for the first statement, A1-Know Company Policies, indicates that 97% of respondents reported use of the competency and 100% of those respondents acquired the competency beyond their basic RN. An extreme apposite case is indicated in statement A14-Practice Professional Ethics, where 100% reported use of the competency and only 6% of those respondents acquired the competency beyond their basic RN. An average of 88% of the statements of competence used in this category were acquired beyond a basic R.N.

TABLE 6

Major Category of Competence - "A" Occupational Health
Program Development

Competency Statment	% of respondents reporting use of competency	% of those reporting use who aquired the competency beyond RN
A1 Know Company Policies	97	100
A2 Know Union Policies	63	100
A3 Comply With Government Regulations	96	98
A4 Interpret Program to Management and Unions	77	99
A5 Maintain Impartiality With Employees and Management	97	82
A6 Obtain and/or Consult With Full or Part Time Medical Medical Director/Consultant	87	74
A7 Design Physical Facilities	38	96
A8 Plan Program Policies	66	97
A9 Plan Program Procedures	74	93
A10 Prepare a Policy and Procedure Manual	55	94
A11 Establish Screening Procedures	75	90
A12 Liaise With Safety Committee	85	98
A13 Participate in Accident Prevention	93	98
A14 Practice Professional Ethics	100	6
A15 Prepare Proposals to Management For Needed Program Changes	71	98
Average %		78%
Average %		88%

Table 7 reports the findings for Category "B"-Work Environment Surveillance. Although an average of only 58% of respondents reported use of the statements of competence included in this category nearly all respondents (96%) reported acquisition of the competence beyond their basic R.N.

TABLE 7

Major Category of Competence - "B" Work Environment Surveillance

Competency Statment	% of respondents reporting use of competency	% of those reporting use who aquired the competency beyond RN
B1 Identify Potential Hazards of Processes And Products	75	95
B2 Apply Principles of Industrial Hygiene in Making a Plant Survey	56	95
B3 Apply Principles of Ergonomics	52	99
B4 Know Employee Job Descriptions	91	99
B5 Monitor Health of Employees at Risk	85	81
B6 Know Threshold Limit Values (TLV's)	56	93
B7 Know Health and Safety Regulaticns	97	97
B8 Take An Air Sample	14	100
B9 Take An Dust Sample	11	100
B10 Test Sound Levels	22	100
B11 Devise a Hearing Conservation Program	49	100
B12 Participate in Health and Safety Promotion	92	94
Average %	58%	Average % 96%

The major category of Competence "C"-Disaster Planning, reported in Table 8 shows the lowest reported use of all major categories. Again, a large percentage of the respondents (93%) acquired the skills beyond their basic diploma nursing program.

Table 9 deals with Category "D"-Health Assessment. The specific skills and knowledge listed under this category are more often attributed to traditional nursing roles with only 79% of respondents reporting acquisition beyond their basic nursing program.

TABLE 8

Major Category of Competence - "C" Disaster Planning			
Competency Statment		% of respondents reporting use of competency	% of those reporting use who aquired the competency beyond RN
C1	Participate in Disaster Planning Committee	35	94
C2	Identify Potential Disasters	55	96
C3	Design a Disaster Plan and Procedures	21	93
C4	Recruit and Train Auxiliary Personnel	35	94
C5	Use Protective and Rescue Equipment	56	91
C6	Liaise with Local Emergency Services	69	85
C7	Participate in Disaster Simulation Exercises	39	95
C8	Review and Revise Disaster Plan and Procedures	29	28
Average %		42%	Average % 93%

TABLE 9

Major Category of Competence - "D" Health Assessment

Competency Statement		% of respondents reporting use of competency	% of those reporting use who acquired the competency beyond RN
D1	Demonstrate Specific Observation Skills	93	45
D2	Describe Occupational Disease Conditions	86	83
D3	Compile a Comprehensive Health History	87	66
D4	Perform a Physical Examination	61	73
D5	Perform Range-of-Motion Assessment	52	56
D6	Operate Diagnostic Equipment	78	70
D7	Perform Pulmonary Function Testing	33	100
D8	Apply Knowledge of Cultural Differences in Testing	61	71
D9	Perform Audiometric Testing	54	100
D10	Perform Vision Testing	75	85
D11	Perform E.C.G.S.	23	84
D12	Collect and Prepare Lab Specimens (i.e. Blood, Urine)	62	45
D13	Perform Pre-Placement Screening Procedures	71	95
D14	Perform Periodic Screening Procedures	82	85
D15	Perform Statutory (Required by Law) Examinations	51	96
D16	Comply with Government Health Regulations	95	96
D17	Interpret Screening Procedure results to Employees	82	86
Average %		67%	79%

Similarly, Table 10 for the major category "E"-Emergency Care, contains skills and knowledge commonly used by any nurse working in a health care institution. Therefore, one would expect the acquisition of those skills in a basic nursing program. Only one competence statement, E 12-Initiate Investigation of an Accident, indicates a high percentage (92%) of respondents who use the skill have

TABLE 10

Major Category of Competence - "E" Emergency Care

Competency Statement	% of respondents reporting use of competency	% of those reporting use who acquired the competency beyond RN
E1 Assess Situation	98	36
E2 Identify Signs and Symptoms of Toxicity	82	65
E3 Establish Nursing Diagnosis	99	31
E4 Administer Cardio Pulmonary Resuscitation	87	67
E5 Administer First Aid	99	55
E6 Use Emergency Equipment (i.e. oxygen, ambu-bag)	91	42
E7 Administer Life Support	80	46
E8 Use Mechanical Ventilators	55	65
E9 Supervise Rescue of Casualties	66	76
E10 Determine Further Action	86	62
E11 Inform Hospital, Management, Next-of-Kin (as required)	88	56
E12 Initiate Investigation of Accident	71	92
Average %	84%	Average % 58%

acquired it beyond their basic R.N. The average rate of acquisition beyond RN for the entire category is only 58%.

The only major category of Competence that reports less than 50% who acquired their skills and knowledge beyond their basic nursing diploma is Category "F"-Treatment Service, which is presented in Table 11. Again, most of the specific statements of competence included in this category would be routinely required by nurses working in traditional nursing roles in Health Care institutions.

TABLE 11

Major Category of Competence - "F" Treatment Service

Competency Statement	% reporting use of competency		% used but not acquired in R.N. program	
F1 Act Within Legal and Professional Parameter	99		25	
F2 Standardize Treatment Procedures	88		58	
F3 Treat Minor Injuries	98		28	
F4 Treat Minor Illnesses	97		23	
F5 Provide On-going Treatments	92		28	
F6 Make Referrals (as Required)	98		57	
F7 Dispense Drugs	96		15	
F8 Syringe Ears	67		59	
F9 Update Immunization Status	50		76	
F10 Assist With Rehabilitation of Returning Employees	81		76	

Average % 87% Average % 47%

As shown in Table 12, Category "G"-Employee Counselling shows a high level of reported use (94%) with many of the basic skills required for effective counselling acquired in a basic nursing program. Only one specific statement of competence, G7-Apply Principles of Industrial Psychology, shows a high level of acquisition beyond a basic nursing program (96%). This high level, compared to most other statements in this category which range from 36%-72% acquisition beyond basic diploma, suggests the specialization evident in occupational health nursing.

TABLE 12

Major Category of Competence - "G" Employee Counselling

Competency Statement	% of respondents reporting use of competency	% of those reporting use who acquired the competency beyond RN
G1 Communicate Effectively	99	63
G2 Conduct Interviews	89	80
G3 Listen Effectively	100	57
G4 Interpret Body Language	96	59
G5 Identify Specific Problem	97	55
G6 Apply Principles of Psychology	95	54
G7 Apply Principles of Industrial Psychology	80	96
G8 Respect Human Rights	100	36
G9 Advise on Consumer Rights (Re: Health Care)	89	72
G10 Advise on Drug/Alcohol Related Problems	94	81

Average %	94%	Average % 65%

Table 13 presents the data for major category "H"-Health Assessment. Again, this category includes specific statements of competence that would not commonly be required to function in a traditional nursing role. Although curriculum for basic nursing programs often include content relating to informal patient teaching, there is seldom any time devoted to the design or delivery of health education programs. A high percentage of respondents (82%) reported use of this area of competence but an even higher number (85%) reported acquiring the skill beyond their basic nursing education.

TABLE 13

Major Category of Competence - "H" Health Education

Competency Statement	% of respondents % of those reporting use reporting of competency use who acquired the competency beyond RN	
H1 Know Characteristics of Adult Learners	80	88
H2 Identify Problems Suitable for Health Education	90	87
H3 Establish Objectives for Health Education Programs	82	86
H4 Select Appropriate Resource People and/or Materials	82	89
H5 Speak in Public	72	88
H6 Give a Demonstration	80	66
H7 Select Appropriate Reading Materials For Individual Health Education	85	79
H8 Publicize Programs	81	94
Average %		82%
		Average % 85%

Category "I"-Record Keeping is presented in Table 14, and shows a wide variation in the level of reported use and acquisition of the specific skills and knowledge. 100% of respondents reported use of statement I2-Maintain Confidentiality whereas only 36% reported use of statement I9-Utilize Computer Systems. The Acquisition of these skills is equally contrasting with only 13% of respondents reporting the acquisition of the statement, maintain confidentiality, beyond their RN, whereas 100% acquired the skill of utilizing computer systems beyond their R.N.

TABLE 14

Major Area of Competence - "I" Record Keeping

Competency Statement	% of respondents reporting use of competency	% of those reporting use who acquired the competency beyond RN
I1 Design Record Keeping System	76	92
I2 Maintain Confidentiality	100	13
I3 Maintain and Revise Records	98	81
I4 Record Information In Detail	98	40
I5 Retrieve Data From Records	93	76
I6 Evaluate Data From Records	85	69
I7 Assess Implications of Information Obtained	87	75
I8 Prepare and Submit Records	98	85
I9 Utilize Computer Systems	36	100
I10 Participate in Research	50	96
Average % 82% Average % 73%		

In the area of Program Administration which, as Major Category "J" is presented in Table 15, it might be expected that many of the skills would be learned on the job rather

TABLE 15

Major Category of Competence - "J" Program Administration

Competency Statement		% of respondents reporting use of competency	% of those reporting use who acquired the competency beyond BN
J1	Apply Managerial Skills	78	88
J2	Determine Staffing Needs	50	90
J3	Prepare Job Descriptions For Health Program Staff	51	94
J4	Select Staff	44	97
J5	Supervise Staff	59	82
J6	Evaluate and Appraise Staff Performance	49	90
J7	Arrange for Staff Development	46	94
J8	Prepare a Budget	39	98
J9	Select and Order Supplies and Equipment	89	90
J10	Schedule Equipment Maintenance	75	90
J11	Establish and Maintain Infection-Control Program	52	58
J12	Practice Clerical Skills as Required for Record Keeping	94	90
J13	Maintain Security (Drugs, Files)	98	35
J14	Supervise Housekeeping of Health Service Facilities	75	73
J15	Serve on Health Related Committees	67	85
J16	Liaise With Community Agencies	85	82
J17	Evaluate and Revise Occupational Health Program	66	95
J18	Revise Policy and Procedure Manual	62	93
Average %		66%	85%

than in formal education programs. As mentioned previously, the percentage distribution of all validation responses is included in Appendix D which provides the breakdown of responses that refer to acquisition on the job compared to acquisition in advanced training programs. For this category only three statements of competence are at a level than 80% reporting acquisition beyond RN.

The last major category of Competence that shows a high level of reported use is Category "K"-Professional Growth, which is presented in Table 16. Although the level of reported use is consistently high for all seven specific statements of competence with the category, the

TABLE 16

Major Category of Competence - "K" Professional Growth

Competency Statement	% of respondents % of those reporting use % of those of competency reporting use who aquired the competency beyond RN	
K1 Recognize need For Continued Education	96	65
K2 Belong to Professional Organizations	99	34
K3 Select Reference Materials	91	74
K4 Study Current Professional Literature	95	48
K5 Participate in Workshops, Seminars, Conferences, and Conventions	90	76
K6 Evaluate Self	91	69
K7 Promote Philosophy of Occupational Health	93	90
Average % 94% Average % 65%		

acquisition of those skills and knowledge beyond a basic diploma nursing program varies from a low of 34% reported for statement K2-Belong to Professional Organizations to a high of 90% for statement K7-Promote the Philosophy of Occupational Health. This again alludes to the degree of specialization in occupational health nursing.

The summary of the data referring to the acquisition of the skills and knowledge used in each major category is presented in Table 17. It is to be noted that the average reported level of use of all statements of competence included in the Phase I profile is 76%. Of that 76% of respondents who reported use of the skills and knowledge, an

TABLE 17

Summary of Responses for Total Profile

Major Category of Competence		average % of respondents reporting use of competency	average % of those reporting use who acquired the competency beyond RN
A	Occupational Health Program Development	78	88
B	Work Environment Surveillance	58	96
C	Disaster Planning	42	93
D	Health Assessment	67	79
E	Emergency Care	84	58
F	Treatment Service	87	47
G	Employee Counselling	94	65
H	Health Education	82	85
I	Record Keeping	82	73
J	Program Administration	66	85
K	Professional Growth	94	65
For Total Profile		Average % 76%	Average % 75%

average of 75% acquired the skills and knowledge beyond their basic nursing diploma program.

Summary

Phase I of this study took the form of a three day workshop involving eleven practising occupational health nurses. Their task was to develop a Profile of the skills and knowledge that are used or perceived as relevant to the job of occupational health nursing. The profile that was developed during that workshop was presented as Figure 4.

Phase II of the study was designed to answer two questions: 1. To what extent do all occupational health nurses in Alberta agree with the skills and knowledge identified during Phase I? and 2. Where were the identified skills and knowledge acquired?

The answers to those questions were based on one hundred and forty responses. The extent of agreement in the first question was determined by combining the tabulated responses that indicated use and perceived relevance for each statement of competence appearing on the profile developed during Phase I. This extent of agreement was reported graphically in a series of graphs, each depicting a major category of competence. These graphs appear in Figures 5-16.

Likewise, in answer to the second question, regarding the acquisition of the skills, the responses were tabulated by frequency count and the results obtained by combining the responses that indicated acquisition of the skill on the job

with responses that indicated acquisition of the skill at some type of advanced educational program beyond a basic diploma nursing program. These results are reported in tabular form in Tables 6-17.

Finally, a photo reduced copy of a validated Competency Analysis Profile, which graphically presents the data obtained in this study, is presented as Figure 17. The major categories of competence have been re-ordered from the original Profile developed in Phase I to reflect the validation process. In descending order, the major categories have been placed to indicate their total relevance or extent of agreement with the original profile. Within each major category, the specific statements of competence were also reordered to indicate a decreasing total relevance or extent of agreement.

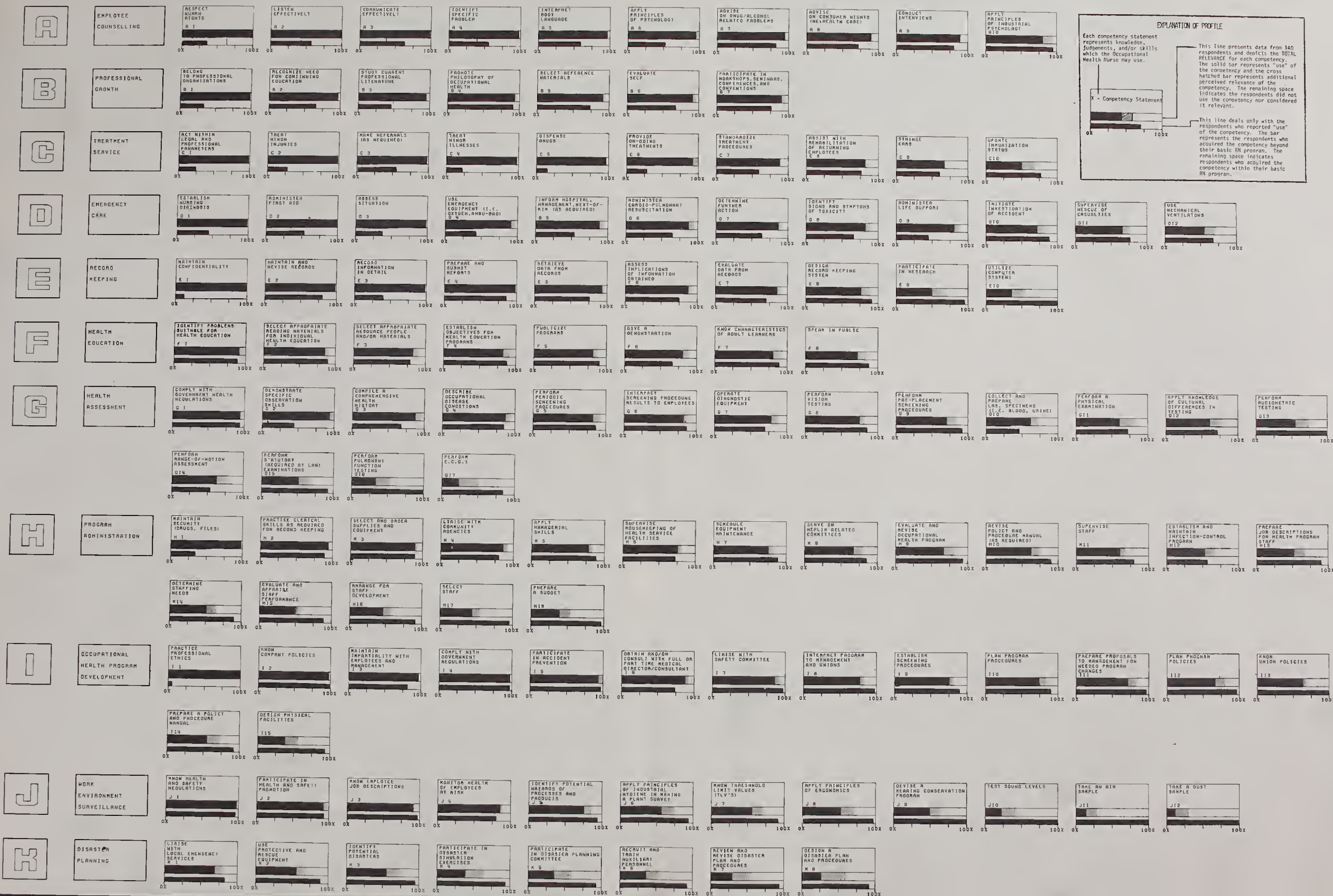
Beneath each competency statement the data pertaining to that specific statement is presented. The top line presents data from all 140 respondents and depicts the total relevance of the statement. The solid bar represents the respondents who reported use of the competency on their job and the cross hatched bar represents the respondents who perceived the competency as relevant to their job even though they did not use it. The remaining portion of the top line represents the respondents who reported that they did not use the competency nor did they perceive it as relevant.

The bottom line deals only with those respondents who reported use of the specific competency statement. The bar

Figure 17. Validated Competency Analysis Profile for
Occupational Health Nursing.

OCCUPATIONAL HEALTH NURSING

COMPETENCY ANALYSIS PROFILE



represents those respondents who acquired the competency beyond their basic diploma nursing program. The remaining portion of the line represents those respondents who acquired the competency within their basic diploma nursing program.

CHAPTER V

The final chapter of this study is intended to summarize the findings of the study, draw conclusions from those findings and make recommendations for further study and action.

Summary

The major purpose of this study was to develop a competency analysis profile for Occupational Health Nurses. The first two phases of a curriculum development model, Competency Analysis Profile System (CAPS), originated by Deane and Manuel (1977) were adapted for the study. The related literature review documented the need for a systematic approach to curriculum development with an integral part of any such development being based on some type of analysis of the knowledge, judgments and/or skills, required to function successfully in the identified occupation.

A second purpose of the study was to determine where the skills and knowledge identified as necessary for occupational health nurses are acquired. The related literature reviewed relating to the educational preparation of occupational health nurses revealed that very few occupational health concepts are taught in the undergraduate diploma or baccalaureate level nursing programs and that there are very few formal educational programs in occupational health nursing at a graduate level.

The study consisted of two distinct phases. The first phase of the study was devoted to a three day workshop which involved eleven practising occupational health nurses working together under the leadership of a skilled group leader. Their assignment was to use a modified brain-storming approach to identify major categories of competence that an occupational health nurse might use on the job in Alberta. Once identified, the major categories of competence were further broken down into specific statements of competence which reflected the skills, knowledge and/or judgement which together would constitute competence in that major category.

Eleven major categories of competence were identified with each category consisting of a varying number of specific statements of competence. A total of one hundred and thirty-seven statements of competence made up the profile as completed during this workshop.

Phase II of the study, referred to as the "Validation" phase by Manuel and Deane (1976), was designed to survey the entire population of two hundred and twenty occupational health nurses working in Alberta to ascertain the extent to which they agreed with the statements of competence listed on the profile as developed during Phase I. It was determined that there was agreement with any particular statement of competence if a respondent indicated use of that specific competency or if the respondent indicated that the competency was relevant to their job even though they

did not use it. This validation process was based on one hundred and forty respondents. The extent of agreement varied from category to category with the average for the total profile being eighty-four percent.

During Phase II, further information was gained regarding the acquisition of the identified statements of competence. Respondents who reported use of a competency were asked where they acquired it. An average of seventy-five percent of respondents who made use of any statement of competence included on the profile, reported that they had acquired that competency somewhere beyond their basic nursing diploma.

Conclusions

On completion of this study the following conclusions were made:

1. The Phase I portion of the Competency Analysis Profile System (CAPS), was an effective means of performing a competency analysis of occupational health nursing.
2. Occupational Health Nursing is a specialized area of nursing which consists of an identifiable cluster of skills, knowledge, and/or judgments as listed on the validated competency analysis profile developed during this study.
3. The acquisition of many of the skills, knowledge, and/or judgments that were identified as specific to the field of occupational health nursing occurs beyond a basic diploma nursing program.

Recommendations for Action

The conclusions derived from this study have led the researcher to make recommendations to the following groups:

Alberta Advanced Education and Manpower

1. It is recommended that Alberta Advanced Education and Manpower continue to fund a post-basic nursing program leading to certification in Occupational Health Nursing.
2. It is recommended that Alberta Advanced Education and Manpower in conjunction with Grant MacEwan Community College make funding available to expand the existing Occupational Health Nursing Certificate Program to meet the needs of occupational health nurses who are unable to attend regular scheduled daytime classes in Edmonton.

Alberta Workers' Health, Safety and Compensation

1. It is recommended that this department in conjunction with Alberta Advanced Education and Manpower utilize the validated Competency Analysis Profile, as developed by this study, to identify specific statements of competence that would be common to other health and safety professionals working in the field of occupational health. It is further recommended that any such commonalities form the basis for the development of learning resource materials.

Grant MacEwan Community College

1. It is recommended that the College continue to offer the

Occupational Health Nursing Certificate Program on a Full Time and Part Time basis. It is further recommended that the curriculum for the existing program be revised to reflect the contents of the Competency Analysis Profile as developed by this study.

2. It is recommended that the College provide funding for the completion of the remaining three phases of the original Competency Analysis Profile System as designed by Manuel and Deane (1976). The three phases remaining which depend on the two phases completed by this study include: setting learning objectives for each competency statement, preparation of learning resources, and establishment and management of a delivery system.

Implications For Further Study

As occupational health nursing is a relatively new area of specialization it has been the target of very little research. More specifically, the educational preparation of occupational health nurses has been decidedly neglected in North America. It is hoped that this study will be the impetus for further research in this area. Recommendations for such research topics might include:

1. Studies to determine the extent of occupational health nursing content in current diploma and baccalaureate nursing programs.
2. A survey of employers of occupational health nurses to determine their perception of the competence they expect their occupational health nurses to demonstrate.

3. A survey of recent graduates from basic diploma and baccalaureate nursing programs to determine their level of competence in the specific statements of competence as identified by this study.

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APPENDIX A

CCPY OF LETTERS RELATED TO THE STUDY

Letter requesting participation in Phase I of the Study.

Dear _____:

I am presently engaged in graduate study in the Industrial and Vocational Department of the Faculty of Education at the University of Alberta. My Master's thesis is concerned with the development of a profile of Occupational Health Nursing. This concern arises from the recommendations of the Task Force on Nursing Education and my desire to improve the Occupational Health Nursing Certificate Program that I am involved with.

I feel sure that you share my concern for improving educational opportunities for Occupational Health Nurses so I am requesting your assistance.

Your experience at _____ would be a definite asset to the method I will be using to complete the profile so I hope that you will be able to participate. The details are as follows:

Date: _____

Place: _____

Reimbursement:

1. All travel, meals and accommodation will be covered.

2. Wage replacement will be available if required.

Within the next few days I will contact you by phone to discuss further details. In the meantime I appreciate your consideration of this request.

Yours truly,

Liz Dawson, R.N., B. Ed.

Letter to Phase I participants confirming arrangements.

Dear

Further to our communication last week I wish to confirm the plans we made to be as follows:

Place: Millwoods Campus
7319 - 29 Avenue (map enclosed)
Room 208

Dates: Wednesday, March 01, 1978
Thursday, March 02, 1978
Friday, March 03, 1978

Time: 09:30 - 16:30 Wednesday, March 01
other days to be arranged

Meals: Provided at the College

Parking: Sticker enclosed for Parking in lot east of
the College

Expenses: Please keep receipts for any expenses
incurred during the three days.

I am pleased that you are able to participate in this exercise and trust that the time we spend together will somehow improve the quality and status of Occupational Health Nursing in Alberta. I look forward to meeting with you next Wednesday.

Yours truly,

Liz Dawson
Enc.

Letter to Occupational Health Nurses who were Unable to
Participate in Phase I of the Study.

Dear -----:

I am sorry you are unable to participate in my research project. Thank you for giving my request your consideration. I hope the results will justify the exercise and somehow improve the status of Occupational Health Nursing in Alberta.

Yours truly,

Liz Dawson

Letter to Employers of Participants in Phase I of the Study.

Dear Sir:

I want to thank you for arranging the release time of your Occupational Health Nurse, _____, to attend a recent working session on Occupational Health Nursing.

I feel the three day session was most worthwhile in improving the educational opportunities for nurses who want to work in the field of Occupational Health. The ideas that _____ was able to contribute to the project were most valuable. You are to be commended for the Occupational Health service you are providing for your employees.

Yours truly,

Liz Dawson
Instructor
Occupational Health Nursing Program

LD:vw

CC: _____

Letter of appreciation for Phase I Participants.

Dear

I want to thank you for your help last week on my research project. I hope the results will justify the exercise and somehow improve the educational opportunities and status for Occupational Health Nursing in Alberta.

In the near future the profile will be distributed to all nurses working in Occupational Health in Alberta. Your help in encouraging your colleagues to complete the profiles would be appreciated.

Yours truly,

Liz Dawson

LD:vw

Letter to Phase I Participants

Dear

I am happy to say that the competency analysis profile for Occupational Health Nursing has gone to the printers and will be in the mail within the next week.

After piloting the original profile it was found necessary to make minor changes in wording and terminology .

I hope you will encourage your colleagues to complete the profile and return it to me. I look forward to being able to share the results with you.

Thanks again for your help with this project.

Yours truly.

Liz Dawson

LD:vw

Letter to all Occupational Health Nurses in Alberta
Requesting their Participation in Phase II of the Study.

Dear -----: (Occupational Health Nurse)

I am presently engaged in graduate study in the Industrial and Vocational Department of the Faculty of Education at the University of Alberta. My thesis is concerned with the development of a profile of Occupational Health Nursing in Alberta. This concern arises from the recommendations of the Task Force on Nursing Education and my desire to improve educational opportunities for nurses working in the field of Occupational Health.

I feel sure that you share these concerns so I am asking you to help in validating the enclosed profile which was prepared by a group of your colleagues. Responding to this document should take approximately 30 - 45 minutes of your time. Please return the completed profile to me in the enclosed envelope by April 30, 1978.

I look forward to receiving your reply and thank you for your anticipated assistance.

Yours truly,

Liz Dawson, R.N., B. Ed.

APPENDIX B

DIRECTIONS FOR COMPLETION OF THE PROFILE

DIRECTIONS FOR COMPLETING THE PROFILE

You have received two copies of a Competency Analysis Profile for Occupational Health Nurses. You are encouraged to keep one copy yourself and complete the other according to the following instructions:

Step I. Spread the Profile out on a table in front of you and quickly read it over. You will notice that the boxes on the left side contain categories of competence or skills. Following each category are several individual competency statements.

Step II. You will notice that each competency statement has spaces below it for you to complete. You are asked to answer 2 questions for each statement.

Competency Statement	---				X	
	Y	RN	JOB	ADV	-- Question BI	
	N	N/R	R		-- Question BII	

Question A

Do you use this competency in your job?

If Yes, circle the "Y" and go to Question BI.

If No, circle the "N" and go to Question BII.

Question B - I

Where did you acquire the competency? Circle the appropriate response. Circle one only.

- RN in your diploma nursing program
- JOE on the job
- ADV advanced training beyond diploma nursing
 program.
 i.e. workshops, seminar, credit courses.

Question B - II

Which of the following statements describes why you do not use the competency? Circle the appropriate response.

- N/R The competency is not relevant to my present
 job.
 i.e. no such hazard, responsibility of
 another member of the health and
 safety team, etc.
- R The competency is relevant to my job but I
 require additional training.

Let's look at two examples:

1.

	Take a Blood Pressure				
Question A	Y	RN	JOB	ADV	Question BI
	N	N/R		R	

Question A - You use this competency in your job.

Question BI - You acquired the competency in your diploma nursing program

2.

	Give an Enema				
Question A	Y	RN	JOB	ADV	Question BII
	N	N/R		R	

Question A - You do not use this competency.

Question BII - The competency is not relevant to your job.

Step III. Empty boxes have been provided for you to add additional competencies that you feel are missing from the profile.

Step IV. Return the completed profile with the attached pink data sheet in the enclosed envelope.

Many thanks for your anticipated assistance.

APPENDIX C

DEMOGRAPHIC DATA SHEETS FOR PARTICIPANTS IN PHASE I AND PHASE II

DEMOGRAPHIC DATA SHEET FOR PHASE I PARTICIPANTS

NAME: _____

BUSINESS ADDRESS: _____ PHONE: _____

SOCIAL INSURANCE NUMBER: _____ BIRTH DATE: _____

EMPLOYER: _____

LENGTH OF TIME WITH PRESENT EMPLOYER: _____

PREVIOUS OCCUPATIONAL HEALTH EXPERIENCE:

EMPLOYER HOW LONG? _____

EMPLOYER HOW LONG? _____

NAME OF COMPANY PERSON TO THANK FOR YOUR RELEASE TIME:

ADDRESS: _____

IF FUNDING BECOMES AVAILABLE TO FURTHER THIS PROJECT WOULD
YOU BE INTERESTED

IN PARTICIPATION? _____

THE COMPLETED PROFILE DEVELOPED DURING THIS SESSION WILL
INCLUDE NAMES OF

PARTICIPANTS. ARE YOU WILLING TO HAVE YOUR NAME AND COMPANY
INCLUDED IN

THE LISTING? _____

SIGNATURE: _____

DEMOGRAPHIC DATA SHEET FOR PHASE II PARTICIPANTS

Please enclose this page with the completed profile. If you provide your name, a summary of the responses will be sent to you. All individual responses will be confidential.

1. NAME:----- (Optional)

2. ADDRESS:-----

3. TYPE OF WORKPLACE:

a. GOVERNMENT _____

b. RETAIL _____

c. EDUCATIONAL INSTITUTION _____

d. HEAVY INDUSTRY _____

e. PETRO-CHEMICAL _____

f. HOSPITAL _____

g. OTHER _____

4. FULL TIME----- PART TIME-----

HOURS/WEEK-----

5. NUMBER OF EMPLOYEES:

100 - 500 () 501 - 1,000 () 1001 - 2,000 () 2,000+ ()

6. LENGTH OF TIME IN YOUR PRESENT POSITION:

0 - 1 years () 1 - 5 years () 5 - 10 years () 10+ years ()

7. TOTAL LENGTH OF TIME IN OCCUPATIONAL HEALTH NURSING:

0 - 1 years () 1 - 5 years () 5 - 10 years () 10+ years ()

8. WHAT % OF YOUR POSITION IS DEVOTED TO NURSING DUTIES?

CLERICAL _____%

ADMINISTRATION _____%

PERSONNEL _____%

OTHER (SPECIFY) _____%

9. YEAR OF GRADUATION FROM DIPLOMA NURSING:

1940 - 1950 () 1951 - 1960 () 1961 - 1970 ()

1971+ ()

10. EDUCATION BEYOND NURSING DIPLOMA:

BS.c () O.H.N.C. () OTHER () NONE ()

11. PLEASE ADD ANY COMMENTS HERE:

APPENDIX D

TABLES LISTING THE PERCENTAGE DISTRIBUTION OF PHASE II VALIDATION RESPONSES

Table 18

Percentage Distribution of Validation Responses for category - "A"
Occupational Health Program Development

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
A1 Know Company Policies	-	95	2	1	2
A2 Known Union Policies	-	60	3	32	5
A3 Comply With Government Regulations	2	83	11	3	1
A4 Interpret Program to Management and Unions	1	58	18	17	6
A5 Maintain Impartiality With Employees and Management	20	61	16	3	-
A6 Obtain and/or Consult With Full or Part Time Medical Director/Consultant	23	56	8	8	5
A7 Design Physical Facilities	1	23	14	44	18
A8 Plan Program Policies	2	37	27	20	14
A9 Plan Program Procedures	5	36	33	17	9
A10 Prepare a Policy and Procedure Manual	4	27	24	27	18
A11 Establish Screening Procedures	8	40	27	18	7
A12 Liaise With Safety Committee	1	66	18	8	7
A13 Participate in Accident Prevention	2	68	23	5	2
A14 Practice Professional Ethics	93	3	4	-	-
A15 Prepare Proposals to Management For Needed Program changes	2	38	31	16	13

Notes: RN-in a diploma nursing program
 JOB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 19

Percentage Distribution of Validation Response for category
"B" - Work Environment Surveillance

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
B1 Identify Potential Hazards of Processes And Products	4	43	28	15	10
B2 Apply Principles of Industrial Hygiene in Making a Plant Survey	3	25	28	26	18
B3 Apply Principles of Ergonomics	1	20	31	30	18
B4 Know Employee Job Descriptions	1	84	6	7	2
B5 Monitor Health of Employees at Risk	17	43	25	12	3
B6 Know Threshold Limit Values (TLV'S)	4	18	34	29	15
B7 Know Health and Safety Regulations	2	70	25	1	2
B8 Take An Air Sample	-	7	7	71	15
B9 Take a Dust Sample	-	4	7	71	18
B10 Test Sound Levels	-	12	10	59	19
B11 Devise a Hearing Conservation Program	-	12	37	36	15
B12 Participate in Health and Safety Promotion	6	57	29	3	5

Notes: RN-in a diploma nursing program
 JOE-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 20

Percentage Distribution of Validation Responses for Category
"C" - Disaster Planning

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
C1 Participate in Disaster Planning Committee	2	24	9	42	23
C2 Identify Potential Disasters	2	39	14	27	18
C3 Design a Disaster Plan and Procedures	1	9	11	45	34
C4 Recruit and Train Auxiliary Personnel	2	25	8	48	17
C5 Use Protective and Rescue Equipment	5	38	13	30	14
C6 Liaise with Local Emergency Services	10	50	9	21	10
C7 Participate in Disaster Simulation Exercises	2	34	3	35	26
C8 Review and Revise Disaster Plan and Procedures	1	21	7	44	27

Notes: RN-in a diploma nursing program
 JOB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 21

Percentage Distribution of Validation Responses for category
"C" - Health Assessment

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	% N/R	R
D1 Demonstrate Specific Observation Skills	53	18	22	3	4
D2 Describe Occupational Disease Conditions	14	38	34	8	6
D3 Compile a Comprehensive Health History	30	30	27	5	8
D4 Perform a Physical Examination	17	19	25	17	22
D5 Perform Range-of-Motion Assessment	27	16	19	24	14
D6 Operate Diagnostic Equipment	24	30	24	13	9
D7 Perform Pulmonary Function Testing	-	9	24	46	21
D8 Apply Knowledge of Cultural Differences in Testing	18	25	18	22	17
D9 Perform Audiometric Testing	-	8	46	27	19
D10 Perform Vision Testing	12	41	22	17	8
D11 Perform E.C.G.S	4	11	8	49	28
D12 Collect and Prepare Lab Specimens (i.e. Blood, Urine)	34	21	7	27	11
D13 Perform Pre-Placement Screening Procedures	4	47	20	15	14
D14 Perform Periodic Screening Procedures	12	46	24	7	11
D15 Perform Statutory (Required by Law) Examinations	2	30	19	35	14
D16 Comply with Government Health Regulations	4	74	17	2	3
D17 Interpret Screening Procedure results to Employees	12	40	30	12	6

Notes: RN-in a diploma nursing program
 JOB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 22

Percentage Distribution of Validation Responses for category
"E" - Emergency Care

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
E1 Assess Situation	63	14	21	1	1
E2 Identify Signs and Symptoms of Toxicity	29	22	31	11	7
E3 Establish Nursing Diagnosis	68	12	19	1	-
E4 Administer Cardio-Pulmonary Resuscitation	27	7	53	5	8
E5 Administer First Aid	44	12	43	1	-
E6 Use Emergency Equipment (I.E. oxygen, ambu-bag)	53	12	26	3	6
E7 Administer Life Support	43	6	31	11	9
E8 Use Mechanical Ventilators	19	18	18	30	15
E9 Supervise Rescue of Casualties	16	28	22	25	9
E10 Determine Further Action	33	29	24	9	5
E11 Inform Hospital, Management, Next-of-Kin (as required)	38	44	6	7	5
E12 Initiate Investigation of Accident	6	56	9	19	10

Notes: RN-in a diploma nursing program
 JCB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 23

Percentage Distribution of Validation Response for category
"F" - Treatment Service

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
F1 Act Within Legal and Professional Parameters	74	18	7	1	-
F2 Standardize Treatment Procedures	37	40	11	8	4
F3 Treat Minor Injuries	70	22	6	2	-
F4 Treat Minor Illnesses	74	21	2	3	
F5 Provide On-going treatments	66	24	2	4	4
F6 Make Referrals (as Required)	42	46	10	1	1
F7 Dispense Drugs	82	11	3	4	-
F8 Syringe Ears	28	30	9	15	18
F9 Update Immunization Status	12	20	18	32	18
F10 Assist With Rehabilitation of Returning Employees	19	48	14	11	8

Notes: RN-in a diploma nursing program
 JCB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 24

Percentage Distribution of Validation Responses for category
"G" - Employee Counselling

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
G1 Communicate Effectively	37	29	33	-	1
G2 Conduct Interviews	17	31	41	9	2
G3 Listen Effectively	43	22	35	-	
G4 Interpret Body Language	39	17	40	3	2
G5 Identify Specific Problem	43	21	33	2	1
G6 Apply Principles of Psychology	43	12	40	-	5
G7 Apply Principles of Industrial Psychology	3	38	39	6	14
G8 Respect Human Rights	64	23	13	-	-
G9 Advise on Consumer Rights (Re: Health Care)	25	42	22	8	3
G10 Advise on Drug/Alcohol Related Problems	18	28	48	4	2

Notes: RN-in a diploma nursing program
 JOB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 25

Percentage Distribution of Validation Responses for category
"H" - Health Education

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	% N/R	R
H1 Know Characteristics of Adult Learners	13	29	38	7	13
H2 Identify Problems Suitable for Health Education	20	42	28	5	5
H3 Establish Objectives for Health Education Programs	12	34	36	9	9
H4 Select Appropriate Resource People and/or Materials	8	40	34	11	7
H5 Speak in Public	9	32	31	16	12
H6 Give a Demonstration	27	29	24	12	8
H7 Select Appropriate Reading Materials For Individual Health Education	18	41	26	11	4
H8 Publicize Programs	5	58	18	12	7

Notes: RN-in a diploma nursing program
 JOB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 26

Percentage Distribution of Validation Responses for category
"I" - Record Keeping

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
I1 Design Record Keeping System	6	54	16	12	12
I2 Maintain Confidentiality	87	10	3	-	
I3 Maintain and Revise Records	18	66	14	2	-
I4 Record Information In Detail	59	29	10	2	-
I5 Retrieve Data From Records	22	60	11	3	4
I6 Evaluate Data From Records	27	42	16	9	6
I7 Assess Implications of Information Obtained	22	40	25	8	5
I8 Prepare and Submit Reports	15	61	22	1	1
I9 Utilize Computer Systems	-	30	6	45	19
I10 Participate in Research	2	28	20	29	21

Notes: BN-in a diploma nursing program
 JCB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 27

Percentage Distribution of Validation Responses for category
"J" - Program Administration

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
J1 Apply Managerial Skills	9	39	30	17	5
J2 Determine Staffing Needs	4	38	8	36	14
J3 Prepare Job Descriptions For Health Program Staff	3	37	11	33	16
J4 Select Staff	2	32	10	45	11
J5 Supervise Staff	11	35	13	34	7
J6 Evaluate and Appraise Staff Performance	5	30	14	43	8
J7 Arrange for Staff Development	3	29	14	43	11
J8 Prepare a Budget	1	31	7	45	16
J9 Select and Order Supplies and Equipment	9	77	3	8	3
J10 Schedule Equipment Maintenance	8	65	2	19	6
J11 Establish and Maintain Infection-Control Program	22	23	7	34	14
J12 Practice Clerical Skills as Required for Record Keeping	9	75	10	4	2
J13 Maintain Security (Drugs, Files)	63	32	3	2	-
J14 Supervise Housekeeping of Health Service Facilities	20	55	-	20	5
J15 Serve on Health Related Committees	11	50	6	20	13
J16 Liaise With Community Agencies	16	50	19	9	6
J17 Evaluate and Revise Occupational Health Program	4	35	27	19	15
J18 Revise Policy and Procedure Manual	5	42	15	26	12

Notes: RN-in a diploma nursing program
 JCB-on the job
 ADV-advanced training beyond diploma nursing program
 N/R-not relevant to my job
 R-relevant to my job

Table 28

Percentage Distribution of Validation Responses for category
"K" - Professional Growth

Competency Statement	Responses that Indicated Use of Competency and Where Acquired			Responses that Indicated that the Competency Was Not Used	
	% RN	Job	Adv.	%N/R	R
K1 Recognize need For Continued Education	34	26	36	2	2
K2 Belong to Professional Organizations	65	17	17	1	-
K3 Select Reference Materials	23	37	31	6	3
K4 Study Current Professional Literature	49	26	20	2	3
K5 Participate in Workshops, Seminars, Conferences, and Conventions	22	33	35	5	5
K6 Evaluate Self	28	39	24	4	5
K7 Promote Philosophy of Occupational Health	9	43	41	3	4

Notes: RN-in a diploma nursing program
JCB-on the job
ADV-advanced training beyond diploma nursing program
N/R-not relevant to my job
R-relevant to my job

APPENDIX E

GRAPHIC AND
LIST OF PARTICIPANTS
FOR PHASE I

A Competency Analysis Profile for Occupational Health Nursing

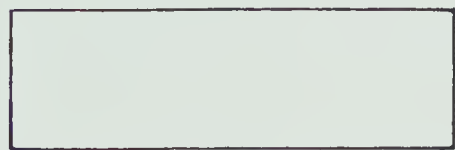
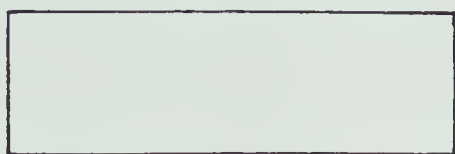
DRAFT COPY
(TO BE VALIDATED)



COMPETENCY ANALYSIS PARTICIPANTS

Jean Eilers	Proctor & Gamble	Grande Prairie
Marg Hookenson	Southern Alberta Institute of Technology	Calgary
Carole Hunter	Eaton's	Edmonton
Bev Marshall	Western Co-op Fertilizers	Calgary
Susan Milsap	Federal Government	Lethbridge
Marg Muza	Red Deer General Hospital	Red Deer
Joe Scharfenberger	Montreal Engineering	Seba Beach
Pat Shelton	Mobil Oil	Calgary
Dorothy Smith	Northern Alberta Institute of Technology	Edmonton
Audrey Swinton	Imperial Oil	Edmonton
Mildred Tunstall	Swifts Canadian	Edmonton

EXPLANATION OF PROFILE



Major areas of competency listed on the left side of the profile.

These spaces are to indicate if the competency is used.

Competency Statement			
Y	RN	JOB	ADV
N	N/R		R

Each competency statement represents knowledge, judgements, and/or skills which the Occupational Health Nurse may use.

This space is used to specify where the competency was acquired.

- RN - in a diploma nursing program
- JOB - on the job
- ADV - advanced training beyond diploma nursing program
i.e. workshops, seminars, credit courses

This space is used to indicate why the competency is not used.

- N/R - The competency is not relevant to my job.
i.e. no such hazard, responsibility of another member of the health team, etc.
- R - The competency is relevant to my present job but I do not use it
i.e. I require additional training, it is not considered as part of my role, etc.

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